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CETking1000

Memory Based Paper - Mixed Slots



Questions from

MAH - MBA / MMS CET 2025

MAH - MBA / MMS CET 2024

MAH - MBA / MMS CET 2023

MAH - MBA / MMS CET 2022

MAH - MBA / MMS CET 2021

Que 1. Find the odd pair of letters from the given alternatives.

- (a) Dollar
- (b) Rupees
- (c) Pound
- (d) Gram

Solution: Option – (d)

Explanation: All except Gram are names of currencies, while Gram is a unit of weight.

Que 2. A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series. 81, 64, 100, 125, 121, ?

- (a) 169
- (b) 216
- (c) 289
- (d) 225

Solution : Option – (b)

Explanation: The pattern followed is :

$$9^2 = 81$$

$$4^3 = 64$$

$$10^2 = 100$$

$$5^3 = 125$$

$$11^2 = 121$$

The next term will be $6^3 = 216$.

Que 3. There will be a certain relationship between the first two numbers. We have to find that and accordingly solve the question. 81: 729 :: 49 : ?

81: 729 :: 49 : ?

- (a) 313
- (b) 379
- (c) 343
- (d) 330

Solution – Option – (c)

Explanation: Here relationship is $9^2 : 9^3 :: 7^2 : 7^3$

Que 4. Find the odd one out from the given options.

- (a) Arctic
- (b) Atlantic
- (c) Indian
- (d) Greenland

Solution: Option (d)

Explanation: a, b and c are oceans.

Que 5. Choose the odd word from the given words.

- (a) Leg
- (b) Hand
- (c) Brain
- (d) Ear

Solution: Option (c) Brain

Explanation: Except Brain, All are external body organs

Que 6. A series is given with one term missing term. Choose the correct alternative B, E, H, K, N, ?

- (a) Q
- (b) M
- (c) N
- (d) W

Solution: Option – (a)

Explanation: Pattern follows,

$$B + 3 = E$$

$$E + 3 = H$$

$$H + 3 = K$$

$$K + 3 = N$$

$$N + 3 = Q$$

Que 7. If R = 18 , N = 14 and BALL = 27, Then value of GO is

- (a) 20
- (b) 22
- (c) 44
- (d) 40

Solution: Option (b)

Explanation: In alphabetical series,
The following pattern is the sum of the place values of the alphabets.

$$\text{BALL} = (2 + 1 + 12 + 12) = 27$$

$$\text{GO} = 7 + 15 = 22$$

Hence, the code for GO is 22.

Que 8. 45 girls are sitting in a row. If Radha is sitting in the 21st position from the left end, then what is her position from the right end?

- (a) 20
- (b) 23
- (c) 25
- (d) 31

Solution: Option (c)

Explanation:

Total number of girls = Left position + Right position – 1

$$45 = 21 + \text{Right position} - 1 = 46 - 21 = 25$$

Hence, Radha is sitting in the 25th position from the right end.

Que 9. If 15 August is the third Monday, then what date will be three days after the third Tuesday of the same month?

- (a) 27
- (b) 22
- (c) 23
- (d) 20

Solution: Option (d)

Explanation: If 15 August will be the third Monday then the third Tuesday must be 16 August.

Three days after the third Tuesday will be 20 August.

20 August.

Que 10. Choose the odd one out.

- (a) Fish
- (b) Snake

- (c) Crocodile
- (d) Whale

Solution: Option (d)

Explanation: All except whales lay eggs.

Que 11. Choose the correct option.

Coal : Black :: Limestone :: ?

- (a) Red
- (b) Blue
- (c) White
- (d) Green

Solution: Option (c)

Explanation: Coal is black in colour similarly limestone is white in colour.

Que 12. Find out the missing number from the given responses.

21	24	36
11	14	12
3	?	4
77	112	108

- (a) 2
- (b) 3
- (c) 4
- (d) 5

Solution: Option (b)

Explanation: 1st column: $21/3 \times 11 = 77$, 3rd column: $36/4 \times 12 = 108$

2nd column: $24/x \times 14 = 112$

$x = 3$.

Que 13. Find out the missing letter from the given responses.

B	H	N
D	J	P

G	M	?
---	---	---

- (a)U
- (b)V
- (c)X
- (d)S

Solution: Option (d)

Explanation:

1st column: $B + 2 = D$, $D + 3 = G$,
 2nd column: $H + 2 = J$, $J + 3 = M$,
 3rd column $N + 2 = P$, $P + 3 = S$.

Que 14. Complete the code with the correct option from the following alternatives.

BOXER : 64 :: PLAYER : ?

- (a)77
- (b)78
- (c)87
- (d)97

Solution: Option – (a)

Explanation: Sum of alphabetical numbers of letters

$$64 \quad \text{BOXER} = (2 + 15 + 24 + 5 + 18) =$$

$$18) = 77 \quad \text{PLAYER} = (16 + 12 + 1 + 25 + 5 +$$

Que 15. Complete the number series.

1 , 9 , 25 , 49 , 81 , ?

- (a)87
- (b)100
- (c)121
- (d)125

Solution: Option – (c)

Explanation: 1^2 , 3^2 , 5^2 , 7^2 , 9^2 then 11^2 .

Que 16. A, P, R, X, S and Z are sitting in a row. S and Z are in the centre. A and P are at the ends. R is sitting to the left of A. Who is to the right of P?

- (a)A
- (b)X
- (c) S
- (d)Z

Solution: Option – (b)

Explanation:

The seating arrangement is as follows: P X S Z R
 A

Therefore, the right of P is X.

Que 17. Find out the wrong number in the series.

121 , 144 , 169 , 195 , 225 , 256

- (a) 121
- (b)195
- (c)265
- (d)225

Solution: Option – (b)

Explanation: Each number is the consecutive square of 11 , 12 ,13 and so on,

But $14^2 = 196$ not 195

Que 18. ELFA, GLHA, ILJA, _____, MLNA

- (a) OLPA
- (b) KLMA
- (c) LLMA
- (d) KLLA

Solution: Option- (d)

Explanation: The second and fourth letters in the series, L and A, are static. The first and third letters consist of an alphabetical order beginning with the letter E.

Que 19. Which pair does NOT belong to others?

- (a) 7-49
- (b)5-125
- (c)11-121
- (d)9-81

Solution: Option – (b)

Explanation: All are numbers and their squares except option (b); which is a number and its cube

Que 20. Select the option which shares a relationship as that shared by that given pair

:

- (12 20 4)
- (a) (5 10 5)
- (b) (13 18 5)

- (c) (17 27 5)
(d) (20 15 25)

Solution: Option- (b)

Explanation: The sum of the numbers is 36
 $12 + 20 + 4 = 36$
 $13 + 18 + 5 = 36$.

Que 21. Look at this series: 22, 21, 23, 22, 24, 23, ... What number should come next?

- (a) 22
(b) 24
(c) 25
(d) 26

Solution: Option – (c)

Explanation: Alternate subtraction and addition series; 1 is subtracted, then 2 is added, and so on.

Que 22. choose the odd one out of the given alternatives:

- (a) Handle
(b) Engine
(c) Wheel
(d) Bike

Solution: Option – (d)

Explanation: Handle, Engine, and wheel are the parts of the Bike

Que 23. If UNIVERSITY is 0976854321, how can TRUSTY be written in that code?

- (a) 250421
(b) 254012
(c) 248239
(d) 258765

Solution: Option – (a)

Explanation:	U N I V E R S I T Y	T
	R U S T Y	
	↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	↓
	↓ ↓ ↓ ↓ ↓	
	0 9 7 6 8 5 4 3 2 1	2
	5 0 4 2 1	

Que 24. If the given letters are represented by the numeral below them,

R T S U V A B
8 5 2 0 6 7 9

Then 5760 =?

- (a) SBAT
(b) TAVU
(c) RBUS
(d) TAUV

Solution: Option – (b)

Explanation:	R T S U V A B	5 7 6 0
	8 5 2 0 6 7 9	T A V U

Que 25. Select the one which is different from the other three?

- (a) Mumbai
(b) Bangalore
(c) Chennai
(d) Ladakh

Solution: Option – (d)

Explanation: Ladakh is a union territory, Rest are cities

Que 1. There is a certain relation between two given words. Find out the best alternative which shares a similar relationship.

Cataclysm : Flood :: Annihilation : ?

- (a) Earthquake
(b) Emergency
(c) Fire
(d) Steam

Solution: Option – (c)

Explanation: Cataclysm is the result of a Flood similarly Annihilation is the result of a Fire

Que 2. Find out the missing term in the following series.

165, 195, 255, ?, 345, 435

- (a) 289
(b) 282
(c) 285
(d) 343

Solution: Option – (c)

Explanation: Series follows the product of 15 and consecutive prime numbers.

$165 = 15 \times 11$
 $195 = 15 \times 13$
 $255 = 15 \times 17$
 $? = 15 \times 19 = 285$
 $345 = 15 \times 23$
 $435 = 15 \times 29$

Que 3. Identify the odd one from the list below:

- (a) Minute : Time
- (b) Barometer : Pressure
- (c) Liter : Volume
- (d) Millimeter : Length

Solution: Option _ (b)

Explanation: A barometer is an instrument and Rest are units of measurement.

Que 4. Find out the missing number in the table given below:

7	?	343	2401
?	9	27	81
6	36	216	?

- (a) (7,3,512)
- (b) (49,3,1296)
- (c) (7,4,4096)
- (d) (49,3,7776)

Solution: Option – (b)

Explanation: Series follows: X, X^2, X^3, X^4 .

Que 5. find out the odd number.

- (a)391
- (b)442
- (c)459
- (d)426

Solution: Option – (d)

Explanation: Rest numbers are divisible by 17

Que 6. In a group of dogs and peacocks, the number of legs is 14 more than twice

the number of heads. The number of dogs is (a) 5 (b) 7 (c) 10 (d) 12

- (a)5
- (b)7
- (c)10
- (d)12

Solution: Option – (b)

Explanation: Let the number of dogs be x and the number of peacocks be y . Then, the number of legs in the group = $4x + 2y$.

number of heads in the group = $x + y$.

so, $(4x + 2y) - 2(x + y) = 14$

Number of dogs = 7.

Que 7. Find out the missing number in the table given below :

3c	4b	?
27a	8c	64b
9c	2a	16b

- (a)2a
- (b)4a
- (c)4b
- (d)4c

Solution: Option – (b)

Explanation: In each row letters a,b,c appear once.

Each column (1st number \times 3rd number = 2nd number)

$x \times 16b = 64b$.

$x = 4$.

Que 8. Select the pair which are similarly related as in the given pair:

Knife: Cut.

- (a) Farmer : Field
- (b)Sculptor : Chisel
- (c)Sailor : Ship
- (d)Spoon : Feed

Solution: Option – (d)

Explanation: There is a relationship of tool and action in knife : cut. Same way spoon is to feed.

Que 9. If “x” denotes “÷”, “+” denotes “-”, “-” denotes “+” and “÷” denotes “x”, then
 $133 - 20 \div 24 \times 2 + 14 = ?$

- (a)350
- (b)357
- (c)358
- (d)359

Solution: Option – (d)

Explanation: $133 + 20 \times 24 \div 2 - 14 = 359$

Que 10. If $2 = 3$, $5 = 7$ and $11 = 13$, then $29 = ?$

- (a)31
- (b)37
- (c)47
- (d)59

Solution: Option – (a)

Explanation: Prime number followed by a consecutive prime number.

Que 11. Select the pair in which the numbers are similarly related as in the given pair:

Book : Chapter.

- (a) Metal : Ore
 - (b) Book : Paper
 - (c) Fan : Blade
 - (d) Furniture : Wood
- Solution: Option – (c)**

Explanation: Book consists of chapter similarly Fan consist of a blade. Rest are product and material

Que 12. In certain code NIGHT = 53846 , MORE = 1972 , then HIRE = ?

- (a)4382
- (b)3472
- (c)4327
- (d)4372

Solution: Option – (d)

Explanation: H I R E
4 3 7 2

Que 13. Find out the next letters in the following series 2, 5, 12, 27, ?, 121.

- (a)54
- (b)64
- (c)58
- (d)48

Solution: Option – (c)

Explanation:

$$2 = 1 \times 2 + 0$$

$$5 = 2 \times 2 + 1$$

$$12 = 5 \times 2 + 2$$

$$27 = 12 \times 2 + 3$$

$$? = 27 \times 2 + 4 = 58$$

$$121 = 58 \times 2 + 5$$

Que 14. Identify the odd one from the list below:

- (a)Shrub
- (b)Tree
- (c)Seed
- (d)Herb

Solution: Option – (c)

Explanation: Rest are types of plants while the seed is a part of it.

Que 15. Which number sequence of the following represents a correct sequence in ascending order?

1. Bungalow 2. Flat 3. Cottage 4. House 5. Palace 6. Mansion

- (a) 3,2,1,4,6,5
- (b) 3,2,4,1,5,6
- (c) 3,2,4,1,6,5
- (d) 5,6,4,1,2,3

Solution:(c)

Explanation: Cottage < Flat < House < Bungalow < Mansion < Palace.

Que16. Find out the next term in the following series 16P4 , 25Q5 , 36R6 , 49S7 , ?

- (a)64U8
- (b)64T4
- (c)64T8
- (d)81T9

Solution: Option – (c)

Explanation: Series follows every letter P, Q, R, S, T, and 1st number is the square of 2nd

number in ascending order like 4,5,6,7,8...so on.

Que17. Find out wrong letters in the following series 0,7,26,64,124,215.....

- (a)26
- (b)64
- (c)0
- (d)215

Solution: Option – (b)

Explanation: logic : (X^3-1) where X is 1,2,3,4,5,6

(Questions 18 – 22) : In the following questions :

- (P@Q) = P is greater than Q
- (P#Q) = P is either greater than or equal to Q
- (P=Q) = P is equal to Q
- (P%Q) = P is smaller than Q
- (P\$Q) = P is either smaller than or equal to Q

Que.18

Statements: M@N , Z\$O , N=X , O@X

Conclusions : (1) M@O , (2) O@Z

- (a)Only 1 follows
- (b)Only 2 follows
- (c)Both 1 and 2 follow
- (d)Neither 1 nor 2 follows

Solution: Option – (d)

Explanation: $M > N = X < O \geq Z$

Que.19

Statements: A=B, B@O, O#N

Conclusions : (1) A@O , B@N

- (a)Only 1 follows
- (b)Only 2 follows
- (c)Both 1 and 2 follow
- (d)Neither 1 nor 2 follows

Solution: Option – (c)

Explanation: $A = B > O \geq N$

Que 20.

Statements : L#M , M#N , N=O

Conclusions : (1) L@N , (2) M#O

- (a)Only 1 follows
- (b)Only 2 follows
- (c)Both 1 and 2 follow
- (d)Neither 1 nor 2 follows

Solution: Option – (b)

Explanation: $L \geq M \geq N = O$

Que 21.

Statements: Z\$X, X%Y, Y@W

Conclusions : (1) Y@Z , (2) W%X

- (a)Only 1 follows
- (b)Only 2 follows
- (c)Both 1 and 2 follow
- (d)Neither 1 nor 2 follows

Solution: Option – (a)

Explanation: $Z \leq X < Y > W$.

Que 22.

Statements: S # T , T = U , U@V

Conclusions : (1) T@V , (2) U\$S

- (a)Only 1 follows
- (b)Only 2 follows
- (c)Both 1 and 2 follow
- (d)Neither 1 nor 2 follows

Solution: Option – (c)

Explanation: $S \geq T = U > V$

Que 23. Identify the odd one from the list below:

- (a) Thailand: Bangkok
- (b) Sri Lanka : Colombo
- (c) China: Shanghai
- (d) Iran: Tehran

Solution: Option – (c)

Explanation: Rests are country and its capital.

Que 24. Complete the alphabetical series given below:

ZAM, YBN, XCO, ___?

(a)WEP

- (b)XDP
- (c)WPE
- (d) WDP

Solution: Option – (d)

Explanation: Combination includes Z, Y, X, and so on, A, B, C and so on, M, N, O, and so on.

Que25. Select the pair in which the numbers are similarly related as in the given pair:

Melt : Liquid : : Freeze : ?

- (a)Ice
- (b)Condense
- (c)Solid
- (d)Crystal

Solution: Option – (c)

Explanation: 1st is the condition of the matter and 2nd is the state of the matter.

Que 1. Pointing to a man, a woman said, “His mother is the only daughter of my mother.” How is the woman related to the man?

- (a)Mother
- (b)Grandmother
- (c)Sister
- (d)Daughter

Solution: Option – (a)

Explanation: Only daughter of my mother — Myself.
So, the woman is the man’s mother

Que 2. If arranging the letters of the word NABMODINT, the name of a game is formed, what are the second and the fourth letters of the word so formed?

- (a)N&B
- (b)M&A
- (c)B&N
- (d)A&M

Solution: Option – (d)

Explanation: The name of the game is BADMINTON. The second and fourth letters are A and M.

Que 3. If the 7th day of a month is 3 days

before Friday, what day will it be on the 19th day of the month?

- (a) Sunday
- (b) Monday
- (c) Wednesday
- (d) Friday

(a)Sunday

(b)Monday

(c)Wednesday

(d)Friday

Solution: Option – (a)

Explanation:

As mentioned, the 7th day of the month is 3 days before Friday, which is Tuesday.

So, the 14th day is also Tuesday and thus, the 19th day is Sunday.

Que 4. If “x” stands for ‘addition’, “+” stands for ‘subtraction’, “÷” stands for ‘multiplication’ and “-” stands for ‘division’, then

$$20 \times 8 + 8 - 4 \div 2 = ?$$

(a)26

(b)25

(c)23

(d)24

Solution: Option – (d)

Explanation: $20 + 8 - 8 \div 4 \times 2 = 24$

Que 5. A woman introduces a man as the “son of the brother of her mother”. How is the man related to the woman?

(a)Grandson

(b)Uncle

(c)Cousin

(d)Son

Solution: Option – (c)

Explanation: Brother of mother — Maternal Uncle; Maternal Uncle’s son — Cousin.

Que 6. Select the pair which is similarly related to the given pair:

Servant: House

(a) Soldier : Gun

(b) Sailor : Ship

(c) Author : Pen

(d) Mattock : Dig

Solution: Option – (b)

Explanation: Relationship between worker and workplace.

Que 7. In a row of 21 girls, when Monika was shifted by four places towards the right, she became 12th from the left end. What was her earlier position from the right end of the row?

- (a) 12th
- (b) 13th
- (c) 15th
- (d) 14th

Solution: Option – (d)

Explanation: The change of place by Monika can be shown as under :

**1 2 3 4 5 6 7 8 9 10 11 Monika 13 14 15 16 17
18 19 20 21**

Clearly, Monika's earlier position was 8th from the left end and 14th from the right end.

Que 8. If we make a meaningful word with the first, fourth, ninth and fourteenth letters of the word 'ADMINISTRATION', which of the following will be the third letter of that word from the right end of that word

- (a) S
- (b) A
- (c) T
- (d) R

Solution: Option – (b)

Explanation: The first, fourth, ninth and fourteenth letters of the word ADMINISTRATION are A, I, R, and N respectively.

The word formed is RAIN. The third letter from the right end is A.

Que 9. Looking at a portrait of a man, Sameer said, "His father is the only son of my father." At whose portrait was Sameer looking?

- (a) His son
- (b) His uncle

- (c) His nephew
- (d) His cousin

Solution: Option – (a)

Explanation: Since he is the only son of his father.

So, Sameer is looking at his son's portrait.

Que 10. Select the pair which is similarly related to the given pair:

Error: Blunder

- (a) Anger : Rage
- (b) Presume: Assume
- (c) Align : Attune
- (d) Fierce : Violent

Solution: Option – (a)

Explanation: Relationship of word and intensity, Rest are word and their Synonym

Que11. A ranked ninth from the top and thirty-eighth from the bottom in a class. How many students are there in the class?

- (a) 45
- (b) 46
- (c) 47
- (d) 48

Solution: Option – (b)

Explanation: Total number of students = (A's position from the Top + A's Position from the Bottom – 1) = (9 + 38 – 1) = 46

Que 12. A meaningful word is made if we take the first, fourth, fifth, seventh, tenth, eleventh, and twelfth letters of the word 'FELICITATIONS'. Which of the following will be the fifth letter of that word from the right end of that word?

- (a) I
- (b) O
- (c) N
- (d) C

Solution: Option – (d)

Explanation: The first, fourth, fifth, seventh, tenth, eleventh, and twelfth letters of the word FELICITATIONS are F, I, C, T, I, O, N

respectively. the word formed is FICTION. The fifth letter from the right is C.

Que13. A man said to a lady, “Your mother’s husband’s sister is my aunt.? How is the lady related to the man?

- (a) Granddaughter
- (b) Aunt
- (c) Sister
- (d) Daughter

Solution: Option – (c)

Explanation:

Your mother’s husband — Your father; Your father’s sister — Your aunt.

So, a lady’s aunt is the man’s aunt and therefore lady is the man’s sister.

Directions (Questions 14 to 17): Read the following information carefully and answer the questions that follow :

- (i) P, Q, R, S, T, and U are six students procuring their Master’s degree in six different subjects — English, History, Philosophy, Physics, Statistics and Mathematics.
- (ii) Two of them stay in the hostel, two stay as paying guests (PG), and the remaining two stay at their homes.
- (iii) R does not stay as PG and studies Philosophy.
- (iv) The students studying Statistics and History do not stay as PG.
- (v) T studies Mathematics and S studies Physics.
- (vi) U and S stay in the hostel. T stays as PG and Q stays at home.

Que 14. Who studies English?

- (a) P
- (b) U
- (c) S
- (d) T

Solution: Option – (a)

Explanation:

Person	Place of stay	Subject
P	PG	English
Q	Home	Statistics or History
R	Home	Philosophy
S	Hostel	Physics
T	PG	Mathematics
U	Hostel	Statistics or History

Que 15. Which of the following combinations of subject and place of stay is not correct?

- (a) Physics — Hostel
- (b) English — Hostel
- (c) English — Hostel
- (d) Mathematics — PG

Solution: Option – (b)

Explanation:

Person	Place of stay	Subject
P	PG	English
Q	Home	Statistics or History
R	Home	Philosophy
S	Hostel	Physics
T	PG	Mathematics
U	Hostel	Statistics or History

Que 16. Which of the following pairs of students stay one each at the hostel and at home?

- (a) US
- (b) SR
- (c) RP
- (d) PQ

Solution: Option – (b)

Explanation:

Person	Place of stay	Subject
P	PG	English
Q	Home	Statistics or History
R	Home	Philosophy
S	Hostel	Physics
T	PG	Mathematics
U	Hostel	Statistics or History

S stays in the hostel and R stays at home.

Que 17. Which of the following pairs of students stay at home?

- (a) P and T
- (b) S and T
- (c) Q and R
- (d) R and S

Solution: Option – (c)

Explanation:

Person	Place of stay	Subject
--------	---------------	---------

P	PG	English
Q	Home	Statistics or History
R	Home	Philosophy
S	Hostel	Physics
T	PG	Mathematics
U	Hostel	Statistics or History

Directions (Que 18 – 21): In each of the following questions, find that word that cannot be made from the letters of the given word:

Que 18. CARPENTER

- (a) NECTAR
- (b) CARPET
- (c) PAINTER
- (d) REPENT

Solution: Option – (c)

Explanation: PAINTER

Que 19. TEACHERS

- (a) REACH
- (b) CHAIR
- (c) CHEER
- (d) SEARCH

Solution: Option – (b)

Explanation: CHAIR

Que 20. CONSOLIDATE

- (a) LENTIL
- (b) SLAIN
- (c) CONDOLE
- (d) DETAIL

Solution: Option – (a)

Explanation: LENTIL

Que 21. UNIFORMITY

- (a) TINY
- (b) TORN
- (c) RENT
- (d) FORM

Solution: Option – (c)

Explanation: RENT

Que 22. Arrange the following in logical order (1)Marriage (2)Death (3)Birth (4)Funeral

- (a) 3142
- (b) 3124
- (c) 1234
- (d) 3412

Solution: Option – (b)

Explanation: Birth came first, Marriage come second, Death come third, funeral come last

Que 23. In the series, 6 4 1 2 2 8 7 4 2 1 5 3 8 6 2 1 7 1 4 1 3 2 8 6 how many pairs of successive numbers have a difference of 2 each?

- (a) 4
- (b) 5
- (c) 6
- (d) 7

Solution: Option – (c)

Explanation: (64) 1 2 2 8 7 [42] 1 (53) (86) 1 2 1 7 1 4 (13) 2 (86)

Thus, there are six such pairs.

Que 24. If Neena says, “Anita’s father Raman is the only son of my father-in-law Mahipal, then how is Bindu, who is the sister of Anita, related to Mahipal?

- (a) Granddaughter
- (b) Niece
- (c) Wife
- (d) Sister

Solution: Option – (a)

Explanation: Only son of Neena’s father-in-law Mahipal — Neena’s husband.

So, Raman is Neena’s husband and Anita and Bindu are his daughters.

Thus, Bindu is the granddaughter of Mahipal.

Que 25. If it is possible to make a meaningful

word with the fourth, the eighth and the tenth letters of the word ‘COUNTERACT, which of the following will be the last letter of that word. If no such word can be made, give X as the answer. If more than one such word can be made, give M as the answer.

- (a) T
- (b) A
- (c) X
- (d) M

Solution: Option – (d)

Explanation: The fourth, eighth and tenth letters of the word COUNTERACT are N, A, and T. The words formed are ANT and TAN.

Que 1. If it is possible to make a meaningful word with the second, the fifth and the eighth letters of the word ‘CARETAKER’, how many such words can be formed?

- (a) 1
- (b) 2
- (c) 3
- (d) More than 3

Solution: Option – (c)

Explanation: The second, fifth, and eighth letters of the word CARETAKER are A, T, and E respectively. The words formed are EAT, ATE, and TEA

Que2. Pointing to a girl in the photograph, Amar said, “Her mother’s brother is the only son of my mother’s father.” How is the girl’s mother related to Amar?

- (a) Sister
- (b) Grandmother
- (c) Aunt
- (d) Mother

Solution: Option – (d)

Explanation: Only son of Amar’s mother’s father — Amar’s maternal uncle.

So, the girl’s maternal uncle is Amar’s maternal uncle. Hence, the girl’s mother is Amar’s mother.

- (a)3.375
- (b)42.25
- (c)30.25
- (d).0625

Solution: Option – (a)

Explanation: Rest are the squares, 3.375 is the cube of 1.5

Que 11. If sana is the sister of the son of yasmin’s son, how is sana related to yasmin ?

- (a)Aunt
- (b)Granddaughter
- (c) daughter
- (d)sister

Solution: Option – (b)

Explanation: Son of Yasmin’s son — Grandson;
Sister of Yasmin’s grandson — Yasmin’s granddaughter

Directions (Questions 12 to 14) : Read the following information carefully and answer the questions given below it :

- (A) There are five friends.
- (B) They are sitting in a row facing south.
- (C) Jaya is to the immediate right of Alka.
- (D) Parma is between Bhagwati and Suhana.
- (E) Suhana is between Jaya and Parma.

**Explanation: Order of sitting is : Right side.....Bhagwati Parma
Suhana Jaya Alka.....Left side**

↓ ↓ ↓ ↓ ↓

(SOUTH)

Que 12. Who is at the extreme left end?

- (a) Bhagwati
- (b) Alka
- (c) Parma
- (d) Suhana

Solution: Option – (b)

Que 13. Who is in the middle?

- (a)Parma
- (b)Alka
- (c)Jaya
- (d)Suhana

Solution: Option – (d)

Que14. Who is sitting second to the left of Jaya?

- (a)Bhagwati
- (b)Parma
- (c)Suhana
- (d)Alka

Solution: Option – (b)

Que 15. Pointing towards a lady, Deepika said, “Her only brother is the father of my daughter’s father.” How is the lady related to Deepika?

- (a)Aunt
- (b)Sister-in-law
- (c)Grandmother
- (d)Mother

Solution: Option – (a)

Explanation: Father of Deepika’s daughter’s father = Deepika’s husband’s father.
So, the lady’s brother is Deepika’s husband’s father or the lady is the sister of Deepika’s husband’s father = Deepika’s aunt.

Que 16. The letters of the word NOSEARGNI are in disorder. If they are arranged in proper order, a meaningful word is formed. What is the last letter of the word so formed?

- (a)A
- (b)N
- (c)I
- (d)G

Solution: Option – (d)

Explanation: Word so formed is: REASONING

Que 17. Select the pair which is similarly related to the given pair:

Advance: Retreat

- (a) Affirm : Deny
- (b) Abduct : Kidnap

- (c) Assign : Allot
 (d) House : Home
Solution: Option – (a)

Explanation: Advance is the antonym of Retreat similarly Affirm is the antonym of Deny, Rest are synonyms

Que 18. Find the wrong number in the given series 121,145,170,197,226

- (a)145
 (b)170
 (c)121
 (d)226

Solution: Option – (c)

Explanation: pattern follows: X^2+1 where X is (11,12,13,14,15) , so $11^2+1 = 122$

Que 19. Introducing a woman to his wife, a man said, “Her brother’s father is the son of my grandfather.” How is the woman related to this man?

- (a)Daughter
 (b) Mother
 (c) Aunt
 (d)Sister

Solution: Option – (d)

Explanation: Son of my grandfather — My father’s brother.
 So one can say that she is the daughter of the brother of my father.
 i.e. She is the man’s sister.

Direction (Questions 20 – 24): Study the given facts carefully and solve the questions that follow :

- (i) There are six players Amit, Bacchan, Chintu, Dev, Eshan, and Fahim. Each one belongs to one of the games, particularly Badminton, Volleyball, Cricket, Hockey, Tennis, and Polo.
 (ii) Each owns a specific brand , particularly Nike, Gucci, Armani, Addidas, Puma and Rolex.
 (iii) Dev performs Polo and owns Nike.
 (iv)Chintu no longer plays tennis or Hockey

- and owns a neither puma nor nike.
 (v) Eshan owns an Addidas and performs Badminton.
 (vi) Bacchan no longer plays Tennis, he owns Rolex.
 (vii) Amit plays Cricket and owns Armani.

Explanation: As per given hints, following table shows, player associated with game & owns which brand.

Player	Game	Brand Name
Amit	Cricket	Armani
Bacchan	Hockey	Rolex
Chintu	Volleyball	Gucci
Dev	Polo	Nike
Eshan	Badminton	Addidas
Fahim	Tennis	Puma

Que20. Who plays Volleyball?

- (a)Bacchan
 (b)Fahim
 (c)Chintu
 (d)Eshan

Solution: Option – (c)

Que21.Which brand does Fahim own?

- (a)Puma
 (b)Rolex
 (c)Armani
 (d)Gucci

Solution: Option – (a)

Que22.find out the correct combination:

- (a)Chintu-Cricket
 (b)Dev-Hockey
 (c)Fahim-Tennis
 (d)Bacchan-Polo

Solution: Option – (c)

Que23. Which of the following combinations of brand and game played is not correct?

- (a) Rolex — Hockey
 - (b) Gucci — Tennis
 - (c) Nike — Polo
 - (d) Armani — Cricket
- Solution: Option – (b)**

Que24. Who plays hockey and owns Rolex?

- (a) Eshan
- (b) Bacchan
- (c) Amit
- (d) Dev

Solution: Option – (b)

Que25. Complete the series. PQE , RSD , TUC , VWB , ?

- (a) XYZ
- (b) ZAY
- (c) XYA
- (d) YAX

Solution: Option – (c)

Explanation: 1st + 2nd position will follow (PQ, RS, TU, VW, XY.....), 3rd position (E, D, C, B, A)

Que 1. If today is Friday, then what will be the day after 363 days?

- A) Sunday
- B) Saturday
- C) Thursday
- D) None of these

Ans – C

Solution-

Today is Friday.
Each day gets repeated after 7 days.
so, on dividing 363 by 7, we get remainder = 6
1 Saturday
2 Sunday
3 Monday
4 Tuesday
5 Wednesday
6 Thursday
Hence, option C is the correct answer.

Que 2. If today is Saturday, then when will it be Monday?

- A) Today
- B) Two days after today
- C) Tomorrow
- D) The day after tomorrow

Ans- D

Solution-

Today is Saturday.
Tomorrow is Sunday.
The day after tomorrow will be Monday.
Hence, option D is the correct answer.

Que 3. If the day after the 11th of March is Thursday, then what will be the last day of the month?

- A) Thursday
- B) Wednesday
- C) Friday
- D) Tuesday

Ans- D

Solution-

The day after the 11th of March is Thursday means on 12th of March is Thursday.
March has 31 days.
19th march is Thursday then 26th March is

Thursday.
 $26 + 5 = 31$ st March.
Thursday + 5 = Tuesday.
Hence, option D is the correct answer.

Que 4. If the day before yesterday was Monday, then what day will it be the day after tomorrow?

- A) Friday
- B) Thursday
- C) Wednesday
- D) Tuesday

Ans- A

Solution-

The day before yesterday is Monday,
Yesterday is Tuesday,
Today is Wednesday
Tomorrow is Thursday
The day after tomorrow is Friday.
Hence, option A is the correct answer.

Que 5. Republic Day of India was celebrated on Thursday in 2017. On which day it was celebrated in 2021?

- A) Tuesday
- B) Wednesday
- C) Thursday
- D) Friday

Ans- A

Solution –

We know that in 365 days we have 1 odd day.
26 January 2017 = Thursday
26 January 2018 = Friday
26 January 2019 = Saturday
26 January 2020 = Sunday.
2020 is a leap year so February has 29 days.
26 January 2021 = Sunday + 2 = Tuesday (+2 because of leap year, In 366 days we have 2 odd days)

Que 6. If the fourth day of a month is Wednesday, then which day will come on the third day after the 19th day of the same month?

- A) Tuesday
- B) Saturday

- C) Sunday
D) Friday

Ans- C

Solution-

The fourth day of the month is Wednesday
so, the first day of the month = Sunday
The third day after the 19th day of the month =
the 22nd day of the month
1st day of the month = 8th day of the month =
15th day of the month = 22nd day of the month
= Sunday.

Que 7. If 13th March 2018 was Tuesday then what was the day on 13th March 2021?

- A) Saturday
B) Sunday
C) Thursday
D) Tuesday

Ans- A

Solution-

We know that in 365 days we have 1 odd day
and in 366 days we have 2 odd days.
13 March 2018 = Tuesday
13 March 2019 = Wednesday
13 March 2020 = Friday
13 March 2021 = Saturday.

Que 8. Which is not a leap year?

- A) 1972
B) 2021
C) 1912
D) 2012

Ans- B

Solution-

Except for 2021, all are perfectly divisible by 4.
So, 2021 is not a leap year.
Hence, option B is the correct answer.

Que 9. How many leap years will be there in 800 years?

- A) 194
B) 196
C) 197
D) 198

Ans – A

Solution-

In 100 years, leap year = 24 years.
Therefore, in 800 years, leap years will be = $8 \times 24 = 192$

Now, since the leap year occurs once after every four years, means the 400th year and 800th also leap years.

So, the total number of leap years in 800 years = $192 + 2 = 194$

Hence, option A is the correct answer.

Que 10. The last day of a century will not be –

- A) Tuesday
B) Saturday
C) Thursday
D) All of the above

Ans – D

Solution-

100 years contain 5 odd days. (so, the last day of the 1st century is Friday.)

200 years contain $(5 \times 2) = 3$ odd days. (so, the last day of the 2nd century is Wednesday.)

300 years contain $(5 \times 3) = 15 = 1$ odd day (so, Last day of 3rd century is Monday.)

400 years contain 0 odd days. (Last day of the 4th century is Sunday.)

This cycle is repeated.

Therefore, the last day of a century cannot be Tuesday or Thursday, or Saturday.

Hence, option D is the correct answer.

Q1. If the mirror is placed vertically, then identify the correct mirror image of O B S T I N A T E?

- (a) ETANIT2BO (b) BOSTINATE
(c) ETANITSBO (d) SOBTNIATE

Answer: a

Explanation:

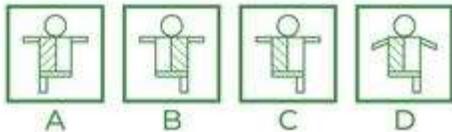
Step 1: Check the first and last letters. Here O is at rightmost and E is at leftmost. According to the lateral inversion rule they will be interchanged in the mirror image.

Step 2: Eliminate the rest which does not follow the rule. This will save your time.

Q2. Choose the correct mirror image which closely resembles the mirror image of the given image.



Options:



Answer: B

Explanation: If the mirror has been put beside the given image, then the shaded part will become LHS in the mirror image because it is RHS in the original image.

Q3. If a clock shows the time 9:15 then what will be the time shown by the mirror image?

Answer: Drawing the clock and then seeing the mirror image of each and everything will make the task cumbersome and tough, which would be time taking in the exam. So such a question can be solved by the following trick:

$$11 : 60 - 9 : 15 = 1 : 45$$

Q4. If a clock shows the time 11:15 then what will be the time shown by the mirror image?

Answer: $23 : 60 - 11 : 50 = 12 : 10$.

Q5. Find the mirror image of a clock showing the time as 6 : 30?

- a) 4 : 30
b) 5 : 30

- c) 12 : 30
d) 10 : 30

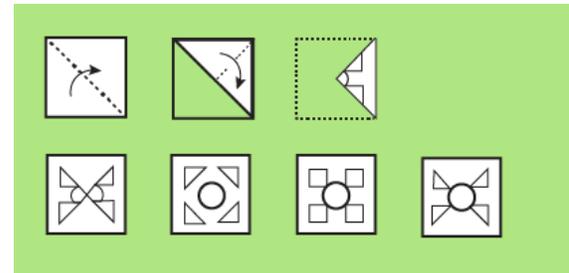
Answer: b

Explanation:

As the question falls into the first case so given time will be subtracted from the 11 : 60.

$$11 : 60 - 6 : 30 = 5 : 30.$$

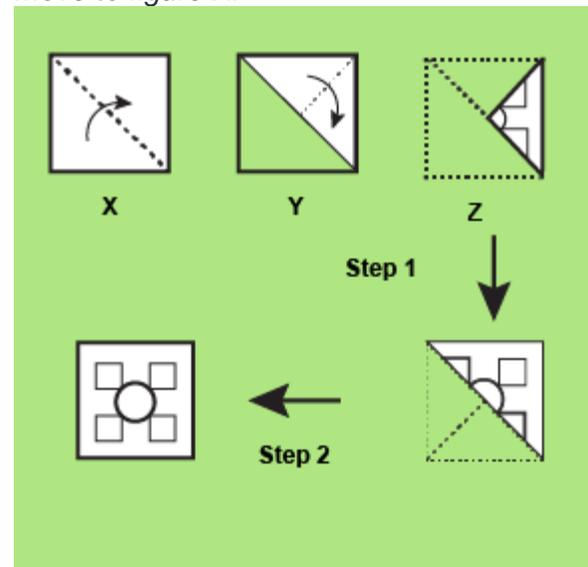
Q 1. Choose the figure from 1, 2, 3, or 4 which closely resembles figure Z.



Non-verbal Reasoning Questions

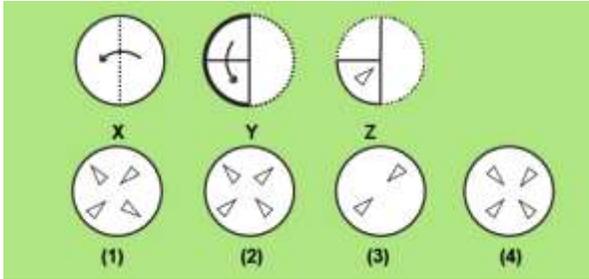
Solution:

Visualizing the cutting Z -> start unfolding the figure Z -> From Z, move to Figure Y -> Then move to figure X.



Non-verbal Reasoning Questions

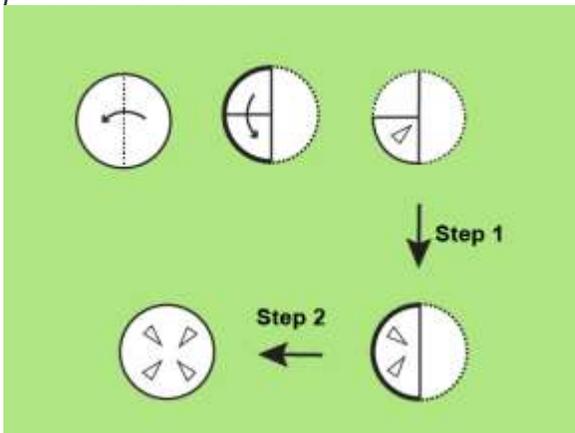
Q 2. Choose the figure from 1, 2, 3, or 4 which closely resembles figure Z.



Non-verbal Reasoning Questions

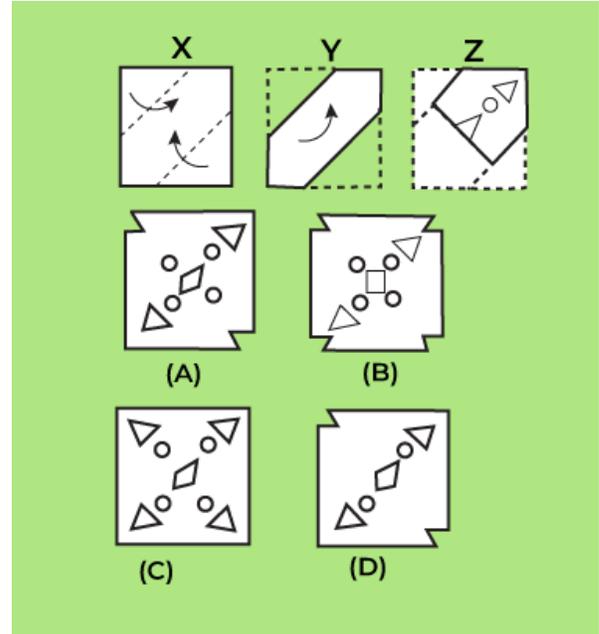
Solution:

When we unfold Z, try to keep an eye on the pointed side of the cut. As the pointed side is facing the center then in all 4 quarters it should point to the center.



Non-verbal Reasoning Questions

Q 3. Choose the figure from A, B, C, and D which closely resembles Figure Z.



Non-verbal Reasoning Questions

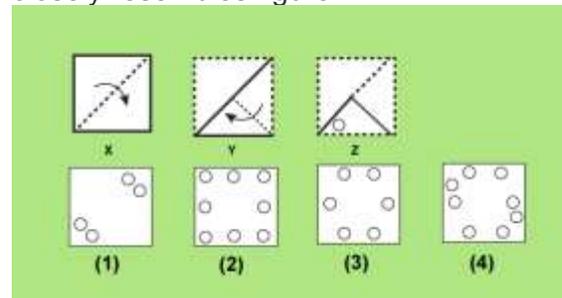
Solution:

Visualizing the cutting Z -> start unfolding the figure Z -> From Z, move to Figure Y -> Then move to figure X.

Keep an eye on the corner triangle, and on circle. These two will be present only on the two sides, then the central triangle will give a rhombus shape after opening.

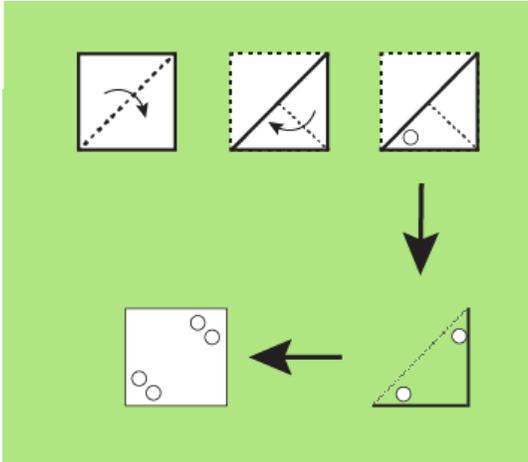
Option D is the correct answer.

Q 4. Choose the figure from 1,2,3 or 4 which closely resembles figure Z.



Non-verbal Reasoning Questions

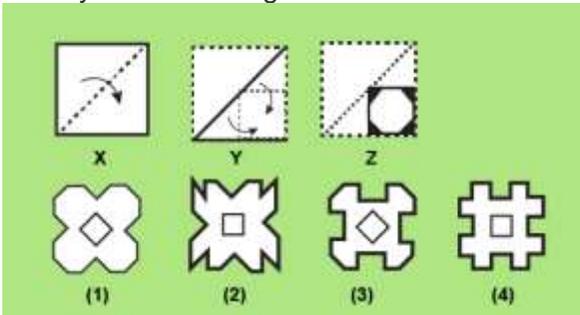
Solution:



Non-verbal Reasoning Questions
 Refer the above image, from figure Z follow the arrows and keep on visualizing the figure in your mind.

You will find Option 1 is the right answer.

Q 5. Choose the figure from 1,2,3 or 4 which closely resembles figure Z.



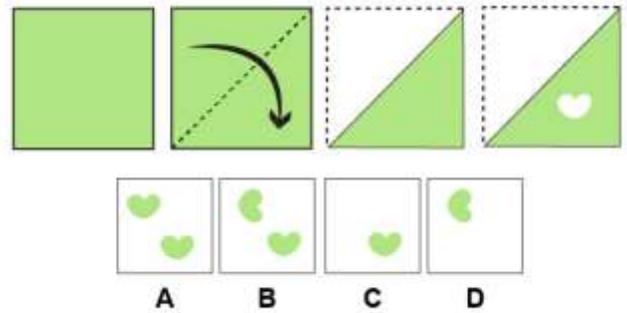
Non-verbal Reasoning Questions

Solution:

Try following the corners and the middle of the sides. You will observe, the missing corners of the final square.

Option 1 is the Correct.

Q 6. Choose the figure from A, B, C, and D that closely resembles the last figure Z after being cut.



Non-verbal Reasoning Questions

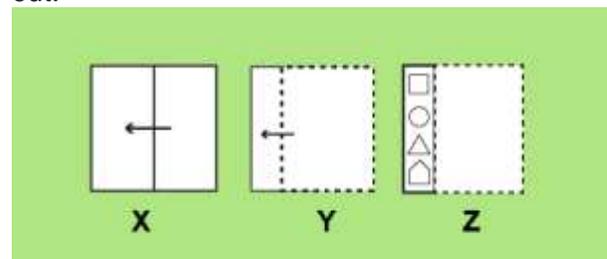
Solution:

When the paper is unfolded, we will witness 2 hearts. This rules out options C and D for the answer.

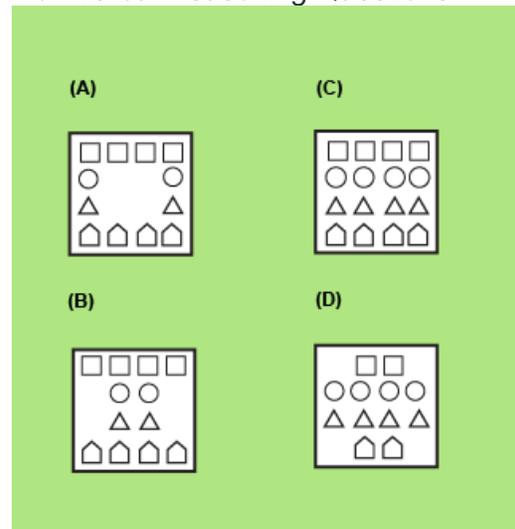
Since the paper was folded diagonally, the second heart must also be flipped vertically and rotated 90 degrees clockwise.

This further disqualifies option A for an answer. Option B is the correct answer.

Q 7. Choose the figure from A, B, C, and D that closely resembles the last figure Z after being cut.

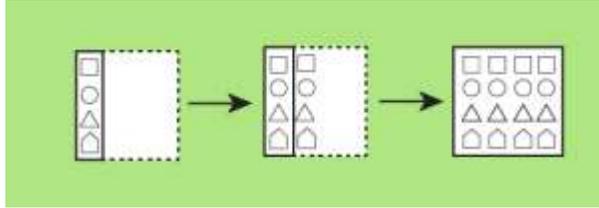


Non-verbal Reasoning Questions



Non-verbal Reasoning Questions

Solution:

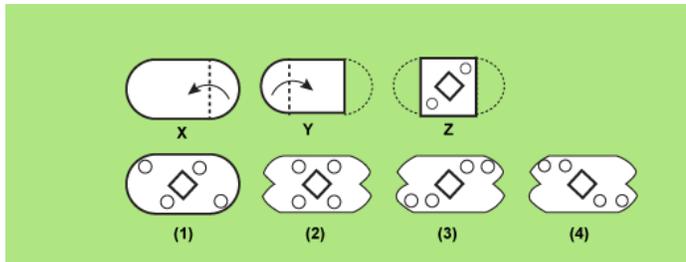


Non-verbal Reasoning Questions

Visualize the image one by one as shown in the above image, you will easily be able to find the right answer.

Option C is the right answer.

Q 8. Find a completely unfolded figure of Z.



Non-verbal Reasoning Questions

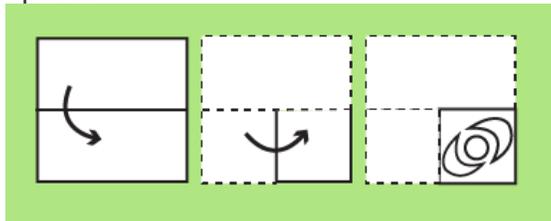
Solution:

Firstly, concentrate on circle, then from Z go to Y and X.

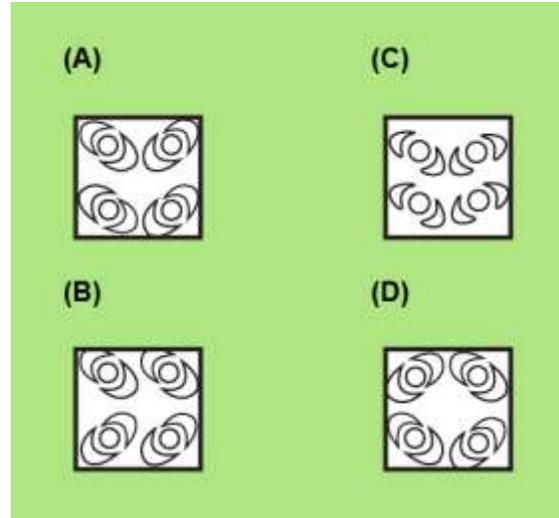
Then concentrate on Center Rhombus.

Option 3 is the right answer.

Q 9. A square sheet of paper is folded and cut as shown below in the question figures. How it will appear when open, choose the correct option.



Non-verbal Reasoning Questions



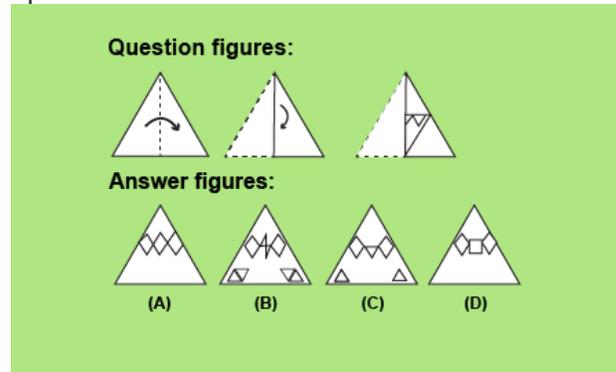
Non-verbal Reasoning Questions

Solution:

By doing the careful examination, we can see there is no pattern at the corner. So, use the elimination method.

D is the right answer.

Q 10. A triangular sheet of paper is folded and cut as shown below in the question figures. How it will appear when open, choose the correct option.



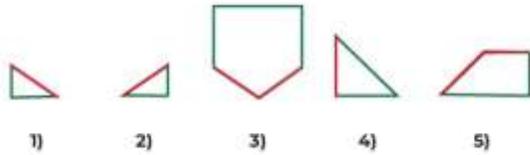
Non-verbal Reasoning Questions

Solution:

In the last figure, we can visualize that pattern will be in center only and that too triangular figures only.

Option A is the correct answer.

Questions 1. Select the alternative group which will make a perfect square.



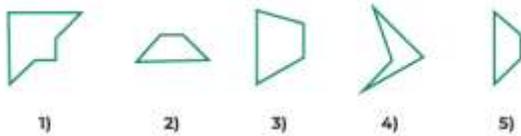
- A. 1,4,5
- B. 2,3,5
- C. 1,2,3
- D. 2,3,4

Solution:

Option 1,2,3 Makes a perfect square.
 A square has 4 equal side and all the angles are 90 Degree. By matching the edges and the angle of 1-2-3 shape we can clearly construct square.



Questions 2. Select the alternative group which will make a perfect square.



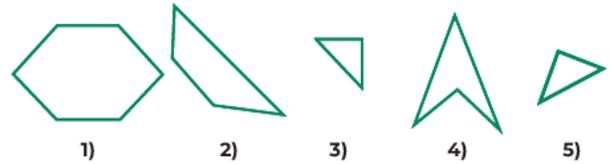
- A. 1,2,3
- B. 1,2,4
- C. 1,2,5
- D. 2,3,5

Solution:

Option 1,2,5 Makes a perfect square.
 A square has 4 equal sides and all the angles are 90 Degree. Try to make all the sides equal and all the angles 90.
 This question requires little imagination. By matching the edges and the adding the angle of 1-2-5 shape we can clearly construct square.



Question 3: Select the alternative group that will make a perfect square.



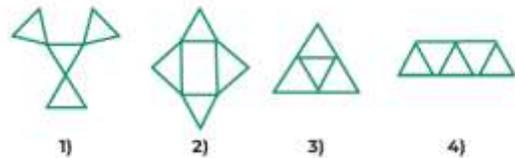
- A. 1,2,3
- B. 1,2,4
- C. 1,3,5
- D. 2,3,5

Solution:

Option 1,3,5 Makes a perfect square.
 To construct a square, you need 4 equal sides and 4, 90 Degree angles. By matching the edges of 1-3-5 shape we can clearly construct square.



Question 4: Select the alternative group which will make a perfect triangular prism.



Solution:

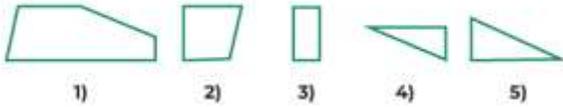
- A. 1
- B. 2
- C. 3
- D. 4

Solution:

Option 3 is the correct answer.
 Perfect triangular prisms have a total of 4 faces and all the faces are of triangular in shape, try to fold the figure, without overlapping or leaving any gaps.



Question 5: Select the alternatives group which will make a perfect rectangle.



- A. 1,2,3
- B. 4,2,1
- C. 2,3,4
- D. None of these

Solution:

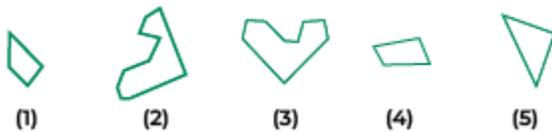
Firstly, remind the properties of a rectangle. It has 4 angles of 90 Degree each, and opposite sides are of equal length.

Now, try to construct the rectangle from the available options.



Combining option 4,2,1, we can make the perfect rectangle.

Question 6. Select the alternative group which will make a perfect square.



- A. 1,2,4
- B. 2,3,4
- C. 1,3,4
- D. 1,2,5

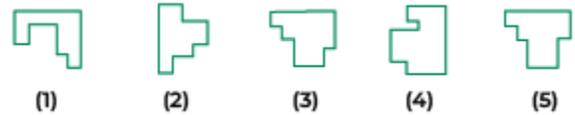
Solution:

All you need to stick to the property of a square, 4 Sides and 4, 90 Degree angles.

1,2,5 makes the perfect square.



Question 7. Choose a figure from the four options that fit exactly into Figure X to form a complete square.



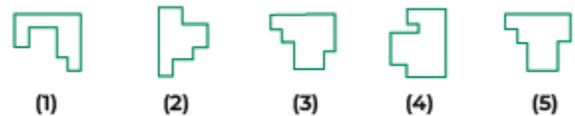
Options:

- A. 1
- B. 2
- C. 3
- D. 4

Solution: Option 2 is correct.



Question 8. Choose a figure from the four options that fit exactly into Figure X to form a complete square.



Option:

- A. 1
- B. 2
- C. 3
- D. 4

Solution:

Try to fit , 1-2-3-4 figure in figure X to make a complete square.

Only Option B fits perfectly.



Question 9. Choose a figure from the four options that fit exactly form a complete triangle.

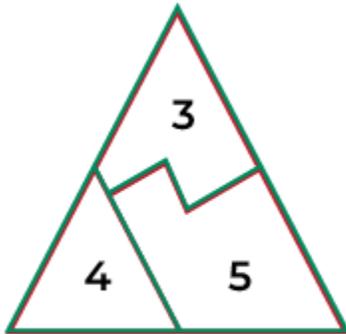


Options

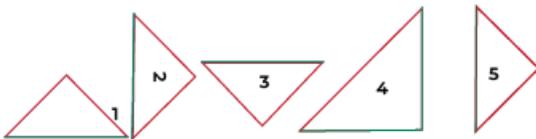
- A. 2, 4, 5
- B. 1, 3, 4
- C. 1, 3, 5
- D. 3, 4, 5

Solution:

As we know, the triangle has 3 sides, and after examining it carefully, only 3,4,5 make the complete triangle.



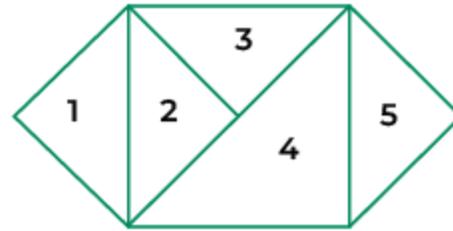
Question 10. Choose a figure from the four options that exactly form a complete hexagon.



- A. 1, 2, 4
- B. 2, 3, 4
- C. 1, 2, 4
- D. All figures

Solution:

D, Hexagon is a 2-D polygon which has 6 sides. Arrange the figures to make an enclosed 6-sided polygon.



Directions to Solve: From amongst the figures marked (1), (2), (3), and (4), select the figure which satisfies the same conditions of placement of the dots as in Figure (X).

Q1. Find X.

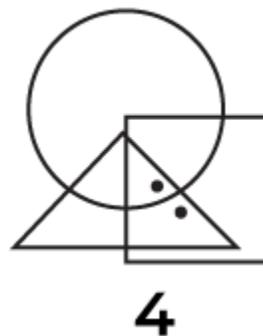
Options:

- A. 1
- B. 2
- C. 3
- D. 4

Solution: Figure X contains two dots, with one dot situated solely within the boundaries of a square and a triangle, and the other dot occupying all three shapes.

If we are to replicate this dot arrangement in the 1-2-3-4 figure, which one will resemble the one observed in figure X.

By carefully observing, only figure 4 matches with our requirement.



Q2. Find X.

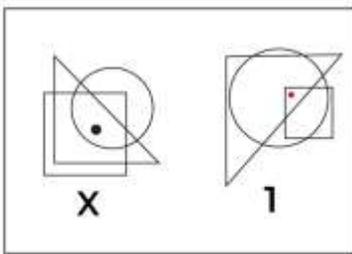
Options:

- A. 1
- B. 2
- C. 3
- D. 4

Solution. In figure X, the dot is in triangle and square only.

If we are to replicate this dot arrangement in the 1-2-3-4 figure, which one will resemble the one observed in figure X.

Only Option 1.



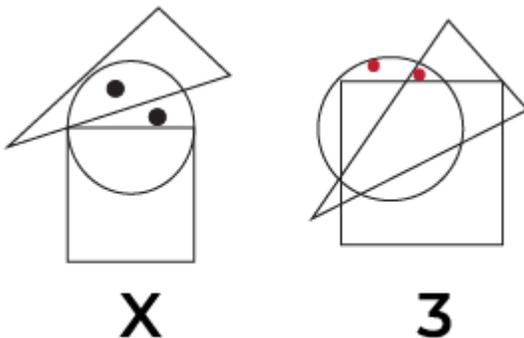
Q3. Find X.

Options:

- A. 1
- B. 2
- C. 3
- D. 4

Solution. The dots in figure X are in only circle and triangle+ circle.

Only option 3 matches with the above requirement.



Q4. Find X.

Options:

- A. 1
- B. 2
- C. 3
- D. 4

Solution. You can observe. One dot is in just triangle and square, where as the other one is inside triangle and circle.

Try putting the dots in the above situation in each and every figure.

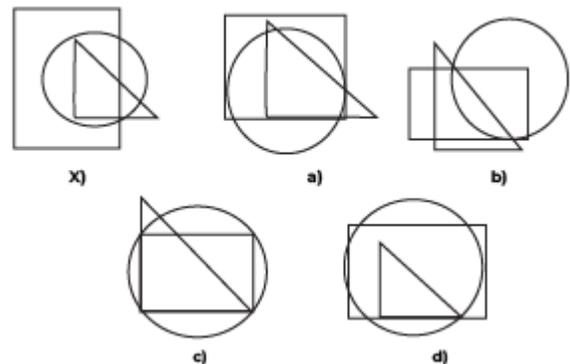
Q5. Find X.

Options:

- A. 1
- B. 2
- C. 3
- D. 4

Solution.

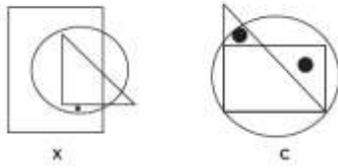
Q6. Find X.



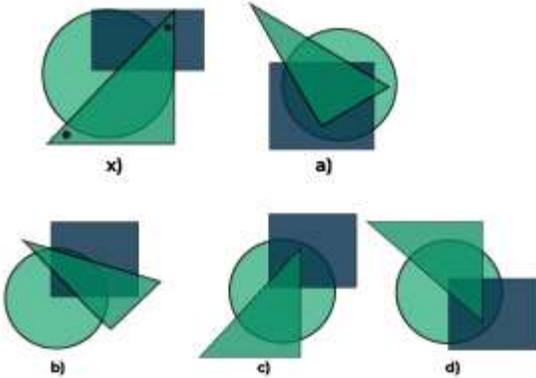
Options:

- A. 1
- B. 2
- C. 3
- D. 4

Solution.



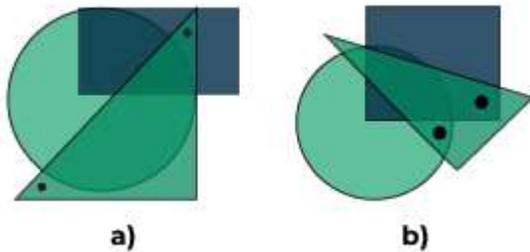
Q7. Find X.



Options:

- A. 1
- B. 2
- C. 3
- D. 4

Solution.

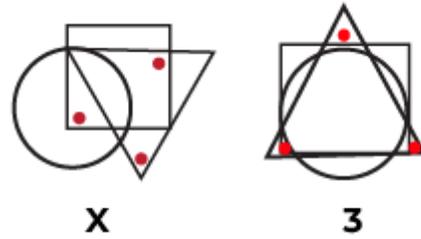


Q8. Find X.

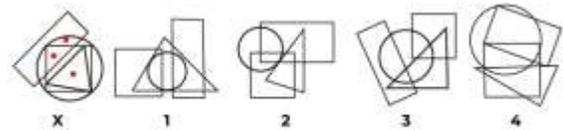
Options:

- A. 1
- B. 2
- C. 3
- D. 4

Solution.



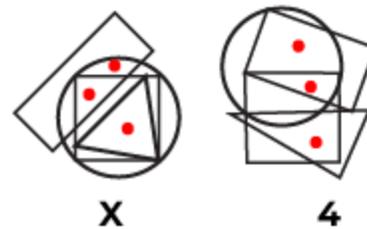
Q9. Find X.



Options:

- A. 1
- B. 2
- C. 3
- D. 4

Solution.



Q10. Find X.

Options:

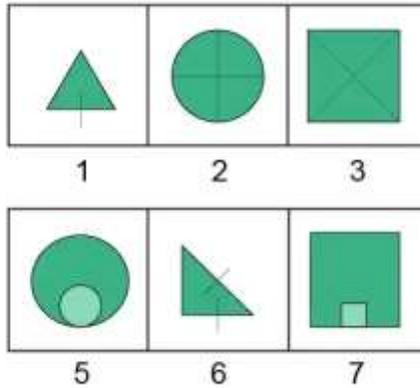
- A. 1
- B. 2
- C. 3
- D. 4

Solution.

Directions to Solve

Group the given figures into 2 or 3 classes (as mentioned in the question) in each of the following questions, using each figure only once.

Question 1: A series of figures are provided that can be classified into 3 classes. Choose from the correct group.



Options:

- (A) 2,3; 4,6; 5,1
- (B) 1,5; 2,3; 4,6
- (C) 1,4; 3,2; 5,6
- (D) 1,3; 4,2; 5,6

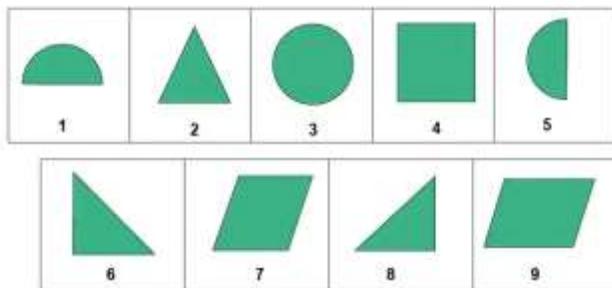
Solution:

As we can see none of the colors are matching, so we will now go with the shapes.

- 1 - 5 has lines on its side.
- 2 - 3 has 2 lines inside the shapes.
- 4 - 6 has an another shape inside them.

Correct option is (B): 1-5, 2-3, 4-6

Question 2: A series of figures are provided that can be classified into 3 classes. Choose from the correct group.



Options:

- (A). 2,3,4 ; 5,6,8 ; 9,1,7
- (B). 1,3,5 ; 2,6,9 ; 4,7,8
- (C). 1,3,5 ; 2,6,8 ; 4,7,9
- (D). 3,2,4 ; 6,5,8 ; 7,9,1

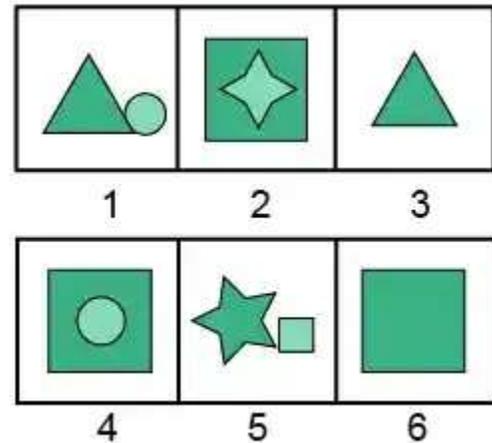
Solution:

Figures 1, 3, and 5 have curved boundaries.

Triangles - 2, 6, and 8.

Quadrilaterals: 4, 7, and 9.

Question 3: A series of figures are provided that can be classified into 3 classes. Choose from the correct group.



Options:

- (A) 1,3; 2,4; 5,6
- (B) 1,4; 3,5; 2,6
- (C) 1,5; 2,4; 3,6
- (D) 1,6; 3,4; 2,5

Solution:

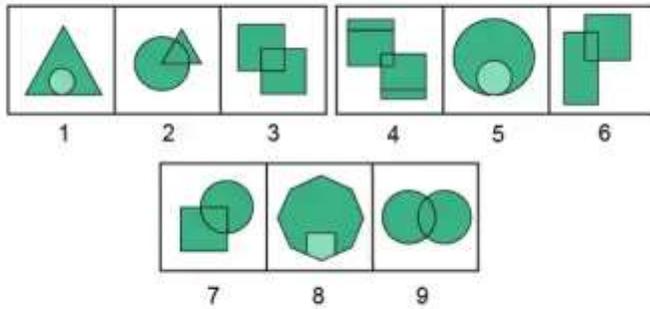
There is no combination in color, triangle is only colored as green, similarly rectangle as blue and star as pink.

3-6- Normal shapes

1-5 - Two shapes are touching each other externally

2-4 - One shape is inside the other shape

Question 4: A series of figures are provided that can be classified into 3 classes. Choose from the correct group.



Option:

- (A). 3,7,8; 4,5,9; 1,2,6
- (B). 1,5,8; 2,6,7 ; 3,4,9
- (C). 1,5,8; 2,4,9; 3,6,7
- (D). 2,4,9; 6,7,8; 1,3,5

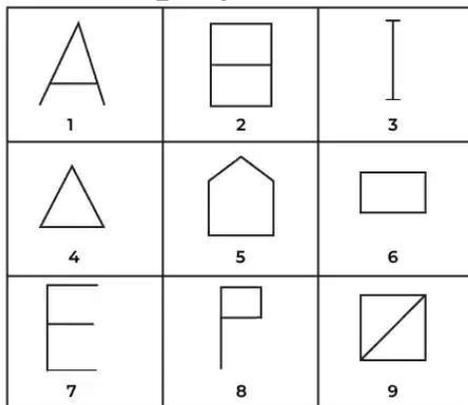
Solution:

Correct answer is 1,5,8; 2,6,7 ; 3,4,9

1-5-8: One shape is inside the other shape
2-6-7: Two Non identical shapes intersecting each other

3-4-9 : Two identical shapes intersecting each other

Question 5: A series of figures are provided that can be classified into 3 classes. Choose from the correct group.



Options:

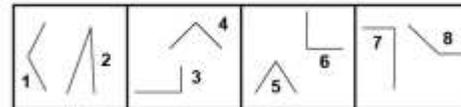
- (A). 1,3,4 2,5,9 6,7,8
- (B). 1,2,3 4,5,6 7,8,9
- (C). 1,5,9 2,4,7 3,6,8
- (D). 3,7,8 1,6,5 4,2,9

Solution:

Figures (1), (3), and (4) all have three sides as can be seen.

Five-sided figures (2), (5), and (9) are shown. Figures 6 through 8 all have four sides.

Question 6: A series of figures are provided that can be classified into 2 classes. Choose from the correct group.



Options:

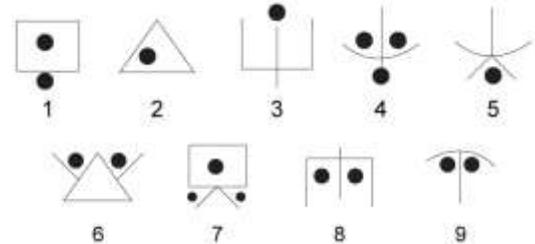
- (A). 2, 4, 5, 7; 1, 3, 6, 8
- (B). 1, 4, 5, 8; 2, 3, 6, 7
- (C). 2, 3, 5, 7; 1, 4, 6, 8
- (D). 1, 2, 5, 8; 3, 4, 6, 7

Solution:

Right angles are shown in the figures 3, 4, 6, and 7.

The figures 1, 2, 5, and 8 are either acute or obtuse angles.

Question 7: A series of figures are provided that can be classified into 3 classes. Choose from the correct group.



Options:

- (A). 1, 7, 8; 2, 6, 5; 3, 4, 9
- (B). 1, 8, 9; 2, 3, 5; 4, 6, 7
- (C). 2, 3, 5; 1, 7, 8; 4, 6, 9
- (D). 2, 6, 7; 1, 3, 4; 5, 8, 9

Solution:

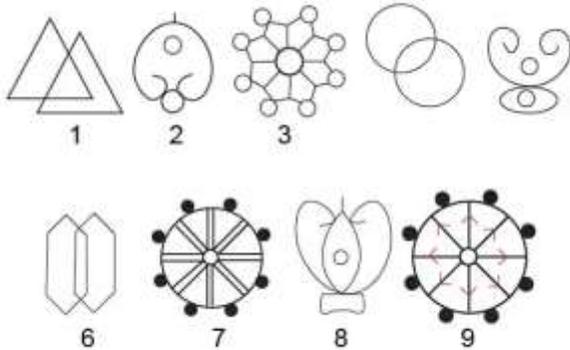
Based on the above-mentioned series of figures, which can be categorised as:

Figures 1, 8, and 9: 2 black dots

Graphs (2), (3), and (5): single black dot

Figures (4) through (7): 3 black dots

Question 8: A series of figures are provided that can be classified into 3 classes. Choose from the correct group.



Options:

- A. 1, 4, 8; 2, 5, 7; 3, 9, 6
- B. 1, 4, 6; 2, 5, 8; 3, 7, 9
- C. 1, 4, 6; 2, 5, 7; 3, 8, 9
- D. 1, 2, 3, 4, 5, 6; 7, 8, 9

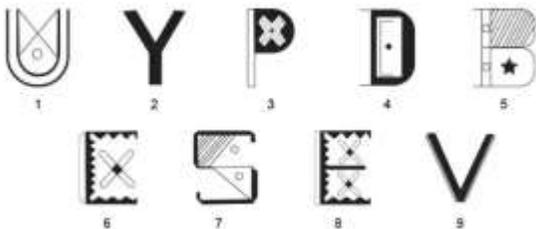
Solution:

Figures (1, 4, 6) ⇒ There are two similar designs.

Figures (2, 5, 8) ⇒ Irregular figures

Figures (3, 7, 9) ⇒ The main design is divided into eight parts.

Question 9: A series of figures are provided that can be classified into 3 classes. Choose from the correct group.



Options:

- A. 1, 5, 7; 2, 4, 9; 3, 6, 8
- B. 1, 5, 7; 2, 8, 9; 3, 4, 6
- C. 1, 7, 8; 2, 4, 9; 3, 5, 6
- D. 1, 4, 6; 5, 8, 9; 2, 3, 7

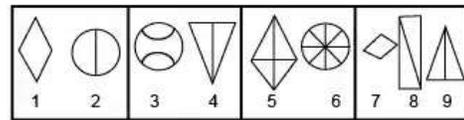
Solution:

An English letter, two circles, one star, and oblique lines can be seen in Figures 1, 5, and 7. An English letter and a dot can be found in Figures 2, 4, and 9.

A cross sign(s) and an English letter can be found in Figures 3, 6, and 8.

Question 10: Match the correct option.

Question Figure :



Answer Figures :

2 3 6	7 8 6	8 5 1	4 5 6
1 5 7	9 5 3	7 9 2	7 8 9
4 9 8	2 1 4	4 3 6	1 2 3

- (1)
- (2)
- (3)
- (4)

Options:

- A. 1
- B. 2
- C. 3
- D. 4

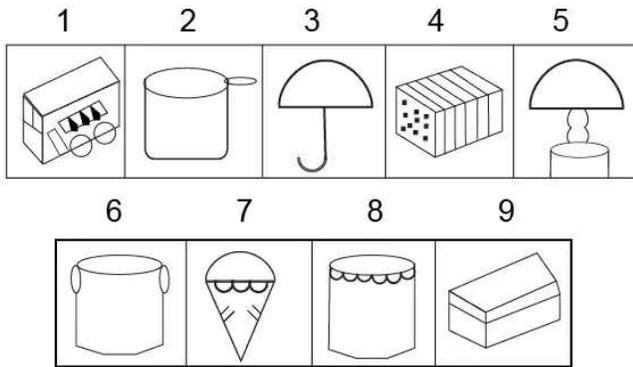
Solution:

Figures 2, 3 and 6 are circles.

Figures 1, 5 and 7 are quadrilaterals.

Figures 4, 8 and 9 contain a diagonal.

Question 11. A series of figures are provided that can be classified into 3 classes. Choose from the correct group.



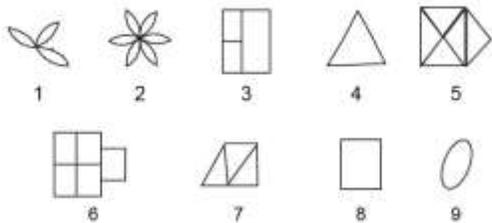
Options:

- A. 1,4,9
2,6,8
3,5,7
- B. 1,4,5
3,6,8
2,7,9
- C. 1,4,6
2,7,8
3,5,9
- D. 1,3,6
2,4,7
5,8,9

Solution:

Figures 1-4-9- Cuboid
Figures 2-6-8-Pot with Lid
Figures 3-5-7- Different articles.

Question 12: A series of figures are provided that can be classified into 3 classes. Choose from the correct group.



Options:

- A. 1, 2, 3; 4, 8, 9; 5, 7, 6
- B. 4, 5, 7; 3, 1, 2; 7, 8, 9
- C. 1, 3, 7; 8, 9, 4; 2, 5, 6
- D. 3, 5, 6; 8, 7, 4; 9, 1, 2

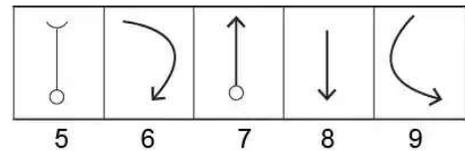
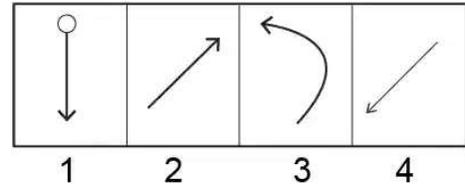
Solution:

Figures (1), (3), and (7) A three-unit system

Figures (9) (and 8) and 4): only one figure

Figures (2) through (6): Fifth unit

Question 13. Group on the basis of options provided.



Option:

- A. (1, 5, 7; 2, 4, 9; 3, 6, 8)
- B.(1, 5, 8; 2, 4, 9; 3, 6, 7)
- C.(1, 5, 7; 2, 4, 8; 3, 6, 9)
- D.(1, 5, 7; 2, 4, 3; 8, 6, 9)

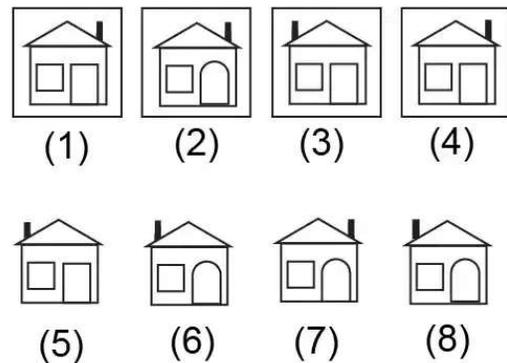
Solution:

Based on the series of figures above, they can be divided into the following groups: Groups 1, 5, and 7 One line segment, one arrowhead, and one circle.

One arrow in groups 2, 4, and 8.

One curve with an arrowhead is in groups 3, 6, and 9.

Question 14. Group on the basis of options provided.



Options:

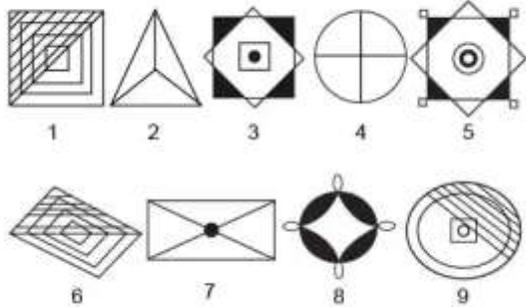
- A.[1, 7; 2, 4; 3, 5; 6, 8]
- B.[1, 4; 2, 7; 3, 5; 6, 8]
- C.[1, 3; 2, 7; 6, 8; 4, 5]

D.[1, 4; 3, 6; 3, 5; 7, 8]

Solution:

Similar patterns can be seen in Figures 1 and 4, similarly, 2-7, 3-5, 6-8 are similar.

Question 15. A series of figures are provided that can be classified into 3 classes. Choose from the correct group.



Options:

- A. 1, 6, 9; 2, 4, 7; 4, 9, 3
- B. 1, 6, 9; 2, 4, 7; 3, 9, 8
- C. 1, 3, 5; 2, 6, 7; 4, 8, 9
- D. 1, 6, 9; 2, 4, 7; 3, 5, 8

Solution:

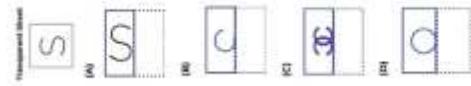
Half-shaded designs are shown in Figures (1), (6), and (9)

Designs in Figures (2), (4), and (7) feature lines and a black dot.

Figures (3), (5), and (8): Four-sector design.

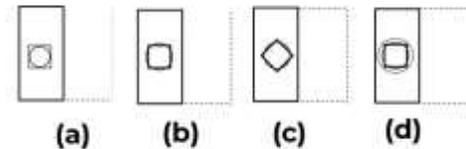
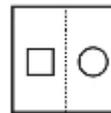
Direction to solve: In each of the following problems, a square transparent sheet (X) with a pattern is given. Determine which of the four options would result in the pattern looking the way you want it to when the transparent sheet is folded at the dotted line.

Q1. In the following problems, a square transparent sheet with a pattern is given. Figure out from amongst the four alternatives how the pattern would appear when the transparent sheet is folded at the dotted line.



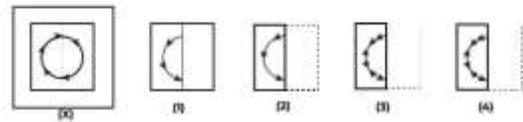
Solution: Option D is the correct answer. By carefully examining it, we can see that the red marked area will become common when the paper is folded. Both the parts of the curves come together to form a circle in option D.

Q2. In the following problems, a square transparent sheet with a pattern is given. Figure out from amongst the four alternatives how the pattern would appear when the transparent sheet is folded at the dotted line.

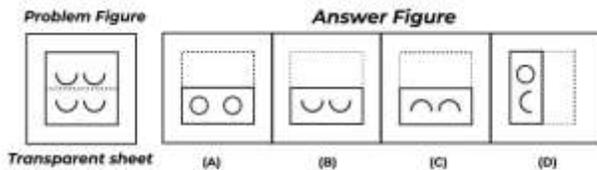


Solution: Option B is the correct answer. As we can see the diameter of the circle and side of the square are of equal length so options A and D are directly eliminated. Option c gets eliminated as here square in rotate 90 degrees from the original image needs to be formed.

Q3. In the following problems, a square transparent sheet with a pattern is given. Figure out from amongst the four alternatives how the pattern would appear when the transparent sheet is folded at the dotted line.



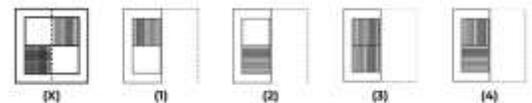
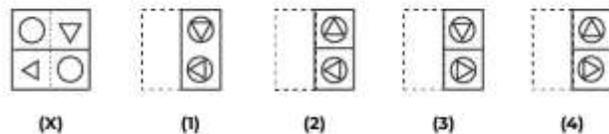
Solution: Option 3 is the correct answer. When the circle with an arrow is folded arrows in both halves of the paper will face in opposite directions as in option 3.



Solution: Option A is the correct answer. The first half of the paper will complete the circle in the second half. When the upper part of the square sheet is folded downward part of the semi-circle gets inverted and both form a circle.

Q4. In the following problems, a square transparent sheet with a pattern is given. Figure out from amongst the four alternatives how the pattern would appear when the transparent sheet is folded at the dotted line.

Q6. In the following problems, a square transparent sheet with a pattern is given. Figure out from amongst the four alternatives how the pattern would appear when the transparent sheet is folded at the dotted line.

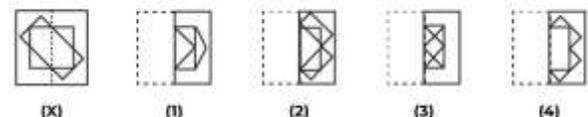


Solution: The lower portion will not change, as the lines in the upper side are vertical, again there will be no change in the direction of the lines. Option 4 is the correct answer.

Solution: Option 3 is the correct answer. The triangle on the upper half will not change but the triangle on the second half will flip horizontally.

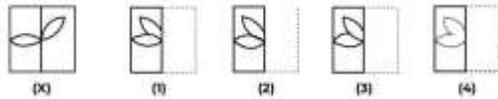
Q7. In the following problems, a square transparent sheet with a pattern is given. Figure out from amongst the four alternatives how the pattern would appear when the transparent sheet is folded at the dotted line.

Q5. In the following problems, a square transparent sheet with a pattern is given. Figure out from amongst the four alternatives how the pattern would appear when the transparent sheet is folded at the dotted line.



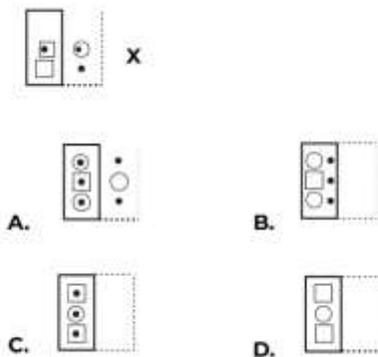
Solution: Option 2 is the correct answer.

Q8. In the following problems, a square transparent sheet with a pattern is given. Figure out from amongst the four alternatives how the pattern would appear when the transparent sheet is folded at the dotted line.



Solution: Option 2 is the correct answer. As we know X is drawn on transparent paper, so we can clearly observe the overlapping of the lines. The leaf of the second part will overlap and cover the leaf of the first part.

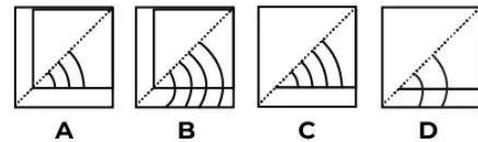
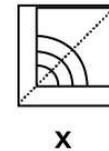
Q9. In the following problems, a square transparent sheet with a pattern is given. Figure out from amongst the four alternatives how the pattern would appear when the transparent sheet is folded at the dotted line.



Solution: Option C is the correct answer. The first part of X will be the same square and will have a dot inside it in the first part, a circle with a dot inside it in the second part, and the square will have a dot inside it in the third part.

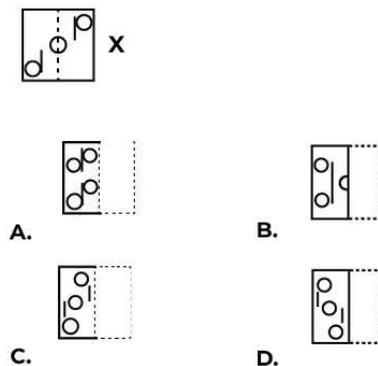
Q10. In the following problems, a square transparent sheet with a pattern is given. Figure

out from amongst the four alternatives how the pattern would appear when the transparent sheet is folded at the dotted line.



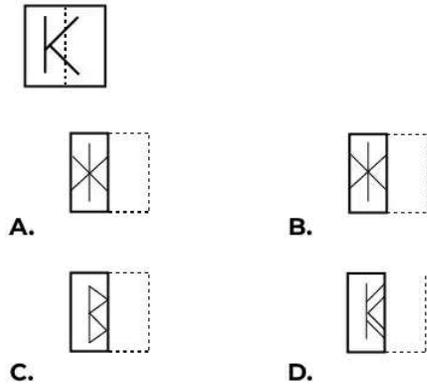
Solution: Option A is the correct answer. The figure has three curves so, after folding as well it should have three curves hence option A is correct.

Q11. In the following problems, a square transparent sheet with a pattern is given. Figure out from amongst the four alternatives how the pattern would appear when the transparent sheet is folded at the dotted line.



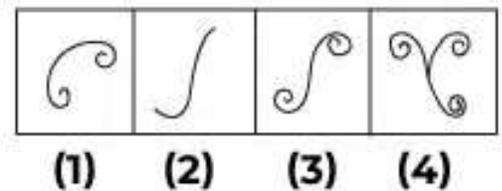
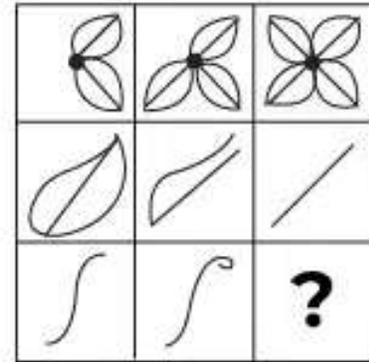
Solution: Option B is the correct answer. Circle is in the middle and when we fold it from the middle we get a semicircle which is clearly shown in Option B.

Q12. In the following problems, a square transparent sheet with a pattern is given. Figure out from amongst the four alternatives how the pattern would appear when the transparent sheet is folded at the dotted line.



Solution: Option C is the correct answer. When the inclined slanted line is folded it will form a triangle with a straight line hence option C is correct.

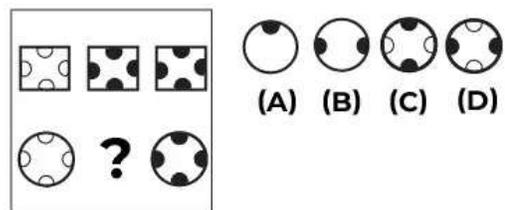
Q1. Select a suitable figure from the four alternatives to complete the figure matrix.



Solution: [use a, b, c, d to form options]

The correct answer is (c) as the number of components in each row is either increasing or decreasing from left to right. In the third row, it increases. In each step, one pattern is added. In row 1 with increase in step leaf is increasing. In row 2 line is decreasing.

Q2. Select a suitable figure from the four alternatives to complete the figure matrix.



Solution: [use a, b, c, d to form options]

The correct answer is (c), we can see that the opposite two semicircles are filling up as we move towards the right. The circles that are filled are vertical semicircles.

Q3. Select a suitable figure from the four alternatives to complete the figure matrix.

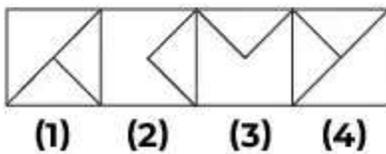
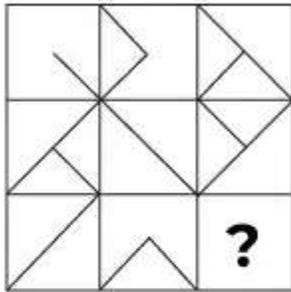
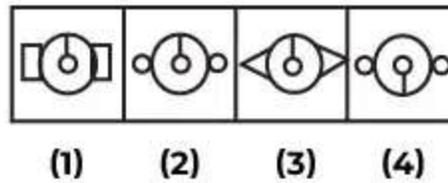
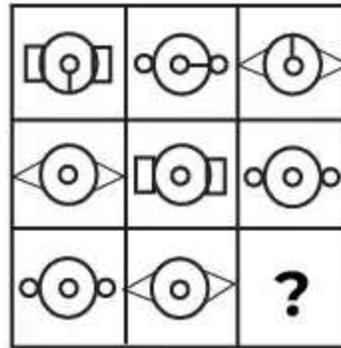


Figure-Matrix-03

Solution: [use a, b, c, d to form options]

Option (b) is the right answer, By carefully observing we can see last figure in each row comprises of parts that are not common to the first two figures. Here first and second figures are getting combined and the common line is deleted after combining the figures. Red-marked lines are common in the first two figures.

Q4. Select a suitable figure from the four alternatives to complete the figure matrix.

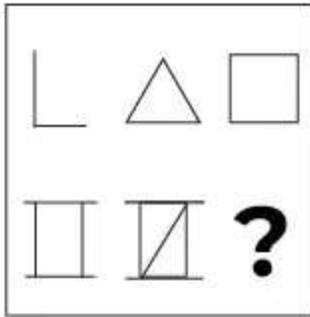


Solution: [use a, b, c, d to form options]

Option (a) is the correct answer. Firstly, We can observe the center circle and line is moving either in a clockwise direction or anti-clockwise.

Secondly, the outer shapes i.e. rectangle, circle, and triangle are moving in a loop, one after the other in this sequence only.

Q5. Select a suitable figure from the four alternatives to complete the figure matrix.



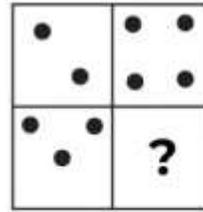
(1) (2) (3) (4)

Figure-Matrix-07

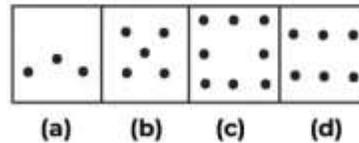
Solution: [use a, b, c, d to form options]

We can observe one line is increasing in each subsequent figure. Option (b) is the correct answer.

Q6. Select a suitable figure from the four alternatives to complete the figure matrix.



Answer Figures



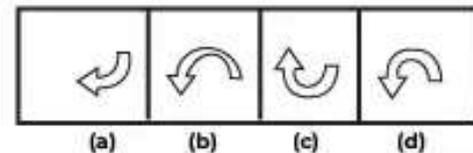
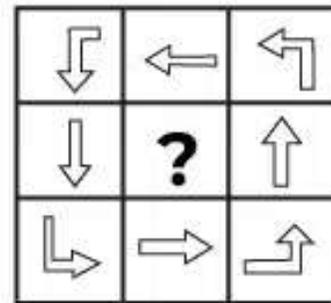
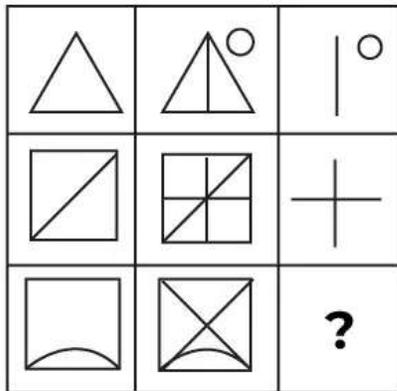
Solution: [use a, b, c, d to form options]

The number of dots in the second figure is clearly twice that of the first figure in the upper row.

Similarly, the number of dots in the second figure in the lower row must be twice the number of dots in the lower first figure. As a result, the total number of dots in the missing segment is $= 2 \times 3 = 6$. As a result, (d) is the correct answer.

Q7. Select a suitable figure from the four alternatives to complete the figure matrix.

Problem Figures



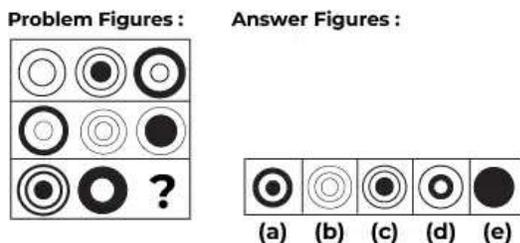
Solution:[use a, b, c, d to form options]

We can observe, that combining the first and third figures of each row makes the second figure. So, option (d) is the correct answer.

Solution:[use a, b, c, d to form options]

Q8. Select a suitable figure from the four alternatives to complete the figure matrix.

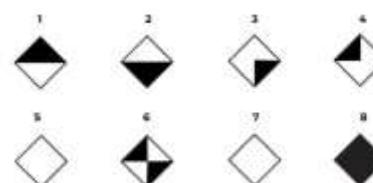
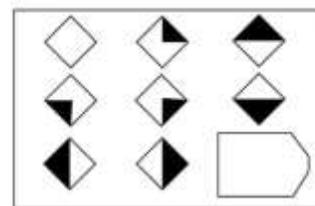
In the question figure, all the arrows are headed in the same direction. They are all pointing in an anticlockwise direction. So the answer can either be (b) or (d). In (b), the shape of the arrow is unnecessarily peculiar. Hence the only shape that fits the matrix will be (d).



Solution: [use a, b, c, d to form options]

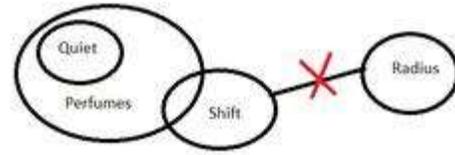
Option (d) is the correct answer. In each row (and column), the superimposition of all three figures results in a darkened circle.

Q10. Select the correct option from 1 to 8.



Solution:

Option 8 is the correct answer. We can visualize the third figure as the superimposition of the first and second figures.



Direction: In each of the following questions two or three statements are given and these are followed by two conclusions. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read the conclusion and then decide which of the given conclusion logically follows the statements:

Option A- If only (1) conclusion follows

Option B- If only (2) conclusion follows

Option C- If either (1) or (2) conclusion follows

Option D- If neither (1) nor (2) conclusion follows

Option E- If both (1) and (2) conclusion follows

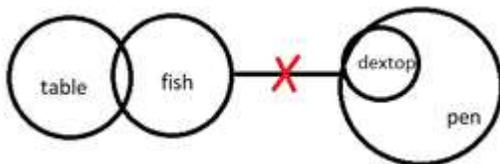
Q1. Statement: Only a few table are fish. No fish is desktop. All desktop is pen.

Conclusion:

1. Some table is not desktop.
2. All table being fish is a possibility.

Answer: Option- A

Some part of table is fish and all fish is not desktop. So conclusion 1 follows.



Q2. Statement: Only perfumes are quiet. Some perfumes are shift. No shift is radius.

Conclusion:

1. All quiet being shift is a possibility.
2. Some perfumes are radius.

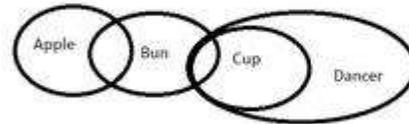
Answer: Option- D

Q3. Statement: Atleast some apple are bun. Few bun are cup. All cup are dancer.

Conclusion:

1. Some apples are cup
2. Some dancer are bun.

Answer: Option- B



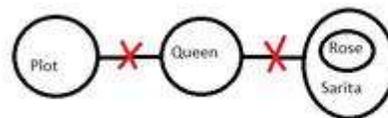
Q4 Statement: No plot is queen. No queen is rose. Only Sarita is rose.

Conclusion:

1. No plot is rose.
2. Some queen are Sarita.

Answer: Option- A

It is clearly mentioned that rose can come only under Sarita.

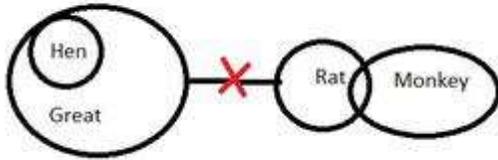


Q5 Statement: All hens are great. Only a few monkeys are rats. No rat is great

Conclusion:

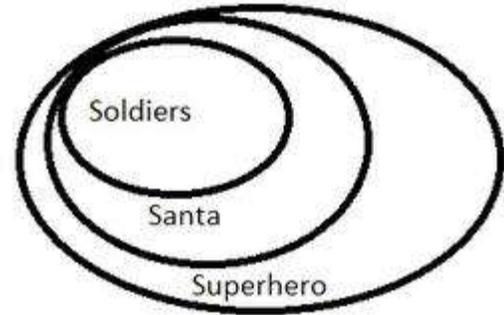
1. Only a few monkey is hen.
2. All monkey are great.

Answer: Option- D



1. All Santa are soldiers.
2. All Santa can be soldiers.

Answer: Option-B

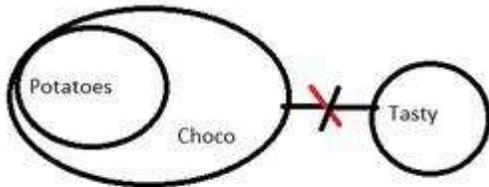


Q6 Statement: Only Choco are potatoes. No choco is tasty.

Conclusion:

1. Some potatoes can be tasty.
2. Some choco can be tasty

Answer: Option-D

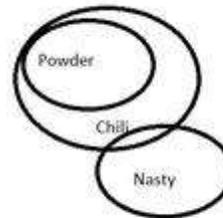


Q9 Statement: All powder is chili. Some chili are nasty.

Conclusion:

1. Some powder can be nasty.
2. All nasty are powder.

Answer: Option- A

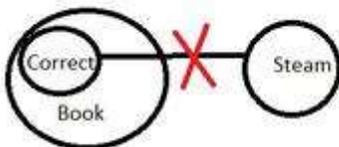


Q7 Statement: Only books are correct. No correct is steam.

Conclusion:

1. Some books can be steam
2. All books can be steam.

Answer: Option- A



Q10 Statement: All wait are onion. Some wait are shadow. No shadow is comb

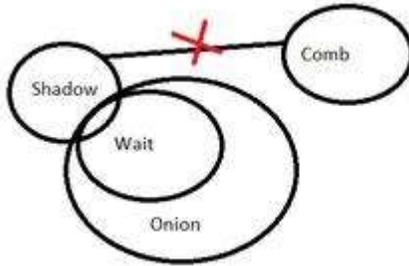
Conclusion:

1. Some onion are not comb.
2. Some shadow being onion is a possibility.

Answer: Option- A

Q8 Statement: All Santa are superhero. All soldiers are Santa.

Conclusion:

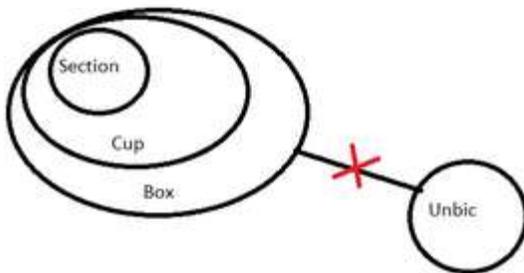


Q11 Statement: All section are cup. All cup are box. No box is unbic.

Conclusion:

1. No section is unbic.
2. Some box are section.

Answer: Option- E

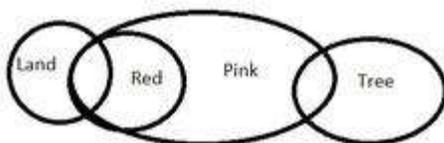


Q12 Statement: Only a few land is red. All red is pink. Some pink is tree.

Conclusion:

1. No red is tree.
2. Some land can be pink.

Answer: Option- D

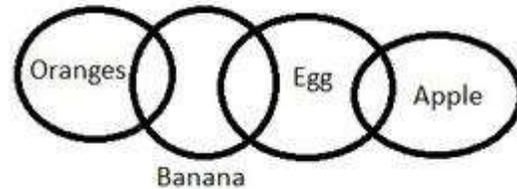


Q13 Statement: Only a few oranges is banana. Some banana is egg. Some egg is apple.

Conclusion:

1. Some banana is apple.
2. No apple is banana.

Answer: Option- C

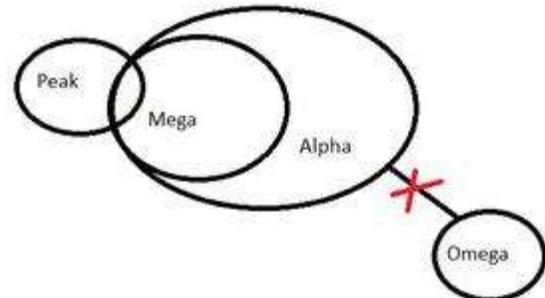


Q14 Statement: Only a few mega is peak. All mega is alpha. No alpha is omega.

Conclusion:

1. All omega can be peak.
2. Some alpha can be peak is a possibility.

Answer: Option- A



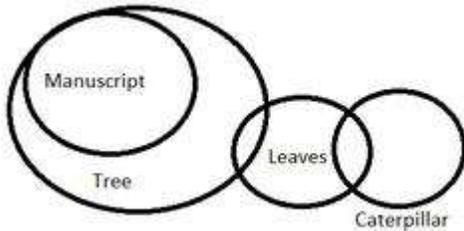
Q15 Statement: Only tree is manuscript. Some tree is leaves. Only a few leaves is caterpillar.

Conclusion:

1. Some leaves can be manuscript.
2. Some leaves is not caterpillar.

Answer: Option- B

It is clearly mentioned that some leaves are caterpillars and as “only a few” represent that not all leaves can be caterpillars. For “manuscript” it is mentioned that it has relation only with “tree”.

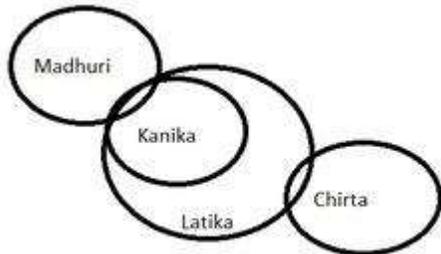


Q16 Statement: Some Madhuri is Kanika. All Kanika is Latika. Only a few Lallita is Chitra.

Conclusion:

1. All Kanika can be Chitra.
2. Some Madhuri is Latika.

Answer: Option- E

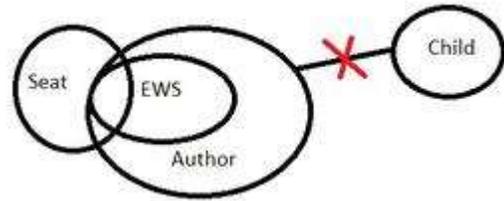


Q17 Statement: Only a few Seats are EWS. All EWS are Author. No author is child.

Conclusion:

1. Some seats are child.
2. No child are seats.

Answer: Option- C



Q18 Statement: Only a few claps are sepoy. All sepoy are commandos. All commandos are unique.

Conclusion:

1. Some sepoy are unique.
2. Some sepoy can be commandos.

Answer: Option- A

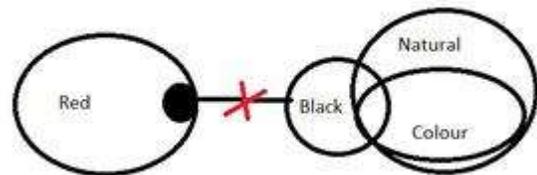


Q19 Statement: Some red is not black. Only a few black are colour. All colours are natural.

Conclusion:

1. Some red can be natural.
2. Some black are not colour.

Answer: Option-E

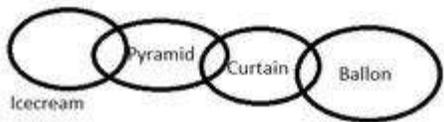


Q20 Statement: A few icecream are pyramid. Some pyramid are curtains. Only a few curtains are balloon.

Conclusion:

1. Some icecream can be balloon.
2. Some balloon are pyramid.

Answer: Option- A



Directions (Q.1-4): If a cube is cut into n^3 identical cubelets using minimum no. of cuts, after painting all faces of the cube with white color, then answer the following questions.

Q1: What is the maximum number of possible painted faces in one of such of cubelets?

Solution: Maximum faces painted will be three in any such cubelets, which will be in case of cubelets coming out of corners of big cube after cutting.

Q2: What is the minimum number of cuts required?

Solution: Total number cuts required in $3(n - 1)$. $(n - 1)$ equidistant cuts parallel to each of 3 faces which are joining to corner.

Q3: How many cubelets will have at most 2 faces painted?

Solution: To find out the number of cubelets with at most 2 faces painted, we need to remove all those cubes which have exactly 3 faces painted = Total no. of cubes – No. of cubes with 3 faces painted = $(n^3 - 8)$

Q4: How many cubelets will have at least 1 face painted?

Solution: To find out the number of cubelets with at least one face painted, we need to remove all the cubelets which have no face painted = $n^3 - (n - 2)^3$

Directions for (Q.5-6): A cube is divided into 343 identical cubelets. Each cut is made parallel to some surface of the cube. But before doing that the cube is colored with green color on one set of adjacent faces, red on the second and blue on the third set.

Q5: How many minimum cuts you have made? (a)15 (b)18 (c)21 (d)9

Solution:

$$n^3 = 343 = 7^3$$

$$\implies n = 7$$

$$\text{Minimum number of cuts} = 3(n - 1)$$

$$= 3(7 - 1)$$

$$= 3 \times 6$$

$$= 18$$

Q6: How many cubelets are coloured with exactly two colours? (a)59 (b)63 (c)51 (d)54

Solution –

$$n^3 = 343 = 7^3$$

$$\implies n = 7$$

Number of cubelet with no face painted will

$$= (n - 2)^3$$

$$= (7 - 2)^3$$

$$= 125$$

No. of cubelet with 2 color = Total no. of cubelet – [cubelets with one color + cubelets with no color + cubelets with three color]

$$= 343 - [125 + 2 + 165]$$

$$= 51$$

Seating Arrangement Single Questions and Answers

Q 1. In a row of 20 students facing North, R is 9th from the left end. How many students are there between R and S?

a) 7

b) 8

c) 9

d) 10

Answer: b) 8

Q 2. There are six persons sitting in a row facing North. A is sitting left to B but right to C. C is sitting to the immediate right of F. D is

sitting left to F but right to E. Who is sitting in the middle?

- a) D and B
- b) A and B
- c) F and C
- d) E and D

Answer: c) F and C

Q 3. In a circular arrangement of 7 persons, A is sitting between B and C, D is sitting immediate right of C and E is sitting immediate left of A. Who is sitting between D and F?

- a) A
- b) B
- c) C
- d) E

Answer: b) B

Q 4. In a rectangular table, A, B, C, and D are sitting on one side facing E, F, G, and H on the other side. A is opposite to E and B is opposite to F. Who is opposite to D? a) G

- b) H
- c) E
- d) F

Answer: d) F

Q 5. There are 8 people sitting around a circular table. A is sitting second to the left of B who is third to the left of C. D is sitting between C and E, and F is sitting to the immediate right of E. Who is sitting to the immediate left of D?

- a) B
- b) C
- c) E
- d) F

Answer: a) B

Q 6. Six friends – A, B, C, D, E, and F – are sitting in a straight line facing North. A is sitting fourth to the left of B and second to the right of F. D is sitting to the immediate left of C, who is not sitting at either of the ends. Who is sitting at the extreme right end of the line?

- a) A
- b) B
- c) E
- d) F

Answer: d) F

Q 7. There are nine people – P, Q, R, S, T, U, V, W, and X – sitting in a circular table facing the center. P is sitting second to the left of S who is third to the left of W. X is sitting to the immediate left of P and to the immediate right of U. Who is sitting exactly between Q and V?

- a) P
- b) R
- c) S
- d) T

Answer: b) R

Q 8. Seven people – A, B, C, D, E, F, and G – are sitting in a row facing North. A is sitting at one of the ends and D is sitting fifth to the right of A. E is sitting to the immediate right of B who is sitting second to the left of F. Who is sitting second to the left of G?

- a) A
- b) B
- c) C
- d) D

Answer: c) C

Q 9. In a rectangular table, eight friends – A, B, C, D, E, F, G, and H – are sitting around facing the center. A is sitting opposite to D who is sitting third to the right of B. F is sitting to the immediate right of A and to the immediate left of G. Who is sitting opposite to G?

- a) B
- b) C
- c) D
- d) E

Answer: b) C

Q 10. Six people – P, Q, R, S, T, and U – are sitting in a circular table facing the center. P is sitting third to the left of Q and to the immediate right of T. R is sitting to the immediate left of S who is not sitting next to P. Who is sitting to the immediate right of Q?

- a) R
- b) S
- c) T
- d) U

Answer: c) T

Questions on Simplification

Q1. Simplify the expression $12/3 + 5(2 - 1)$.

Solution:

We can simplify by first evaluating the expressions inside the parentheses: $12/3 + 5(2 - 1) = 4 + 5(1)$ Then, we can multiply and add: $5(1) = 5$ $4 + 5 = 9$ Therefore, $12/3 + 5(2 - 1)$ simplifies to 9.

Q2. Simplify the expression $2(4 + 6) - 3(2 + 5)$.

Solution:

We can simplify by first evaluating the expressions inside the parentheses: $2(4 + 6) - 3(2 + 5) = 2(10) - 3(7)$ Then, we can multiply and subtract: $2(10) = 20$ and $3(7) = 21$ $20 - 21 = -1$ Therefore, $2(4 + 6) - 3(2 + 5)$ simplifies to -1.

Q3. Simplify the expression $(3x - 7) + (2x + 5)$

Solution:

Combine like terms: $(3x - 7) + (2x + 5) = (3x + 2x) + (-7 + 5) = 5x - 2$ Therefore, the simplified expression is $5x - 2$.

Q4. Simplify the expression $2(3x + 4) - 5x + 2(2x - 3)$

Solution:

Distribute the coefficients: $2(3x + 4) = 6x + 8$
 $2(2x - 3) = 4x - 6$ Combining like terms: $6x + 8 - 5x + 4x - 6 = (6x - 5x + 4x) + (8 - 6) = 5x + 2$
 Therefore, the simplified expression is $5x + 2$.

Q5. Simplify the expression $(2x + 3y)^2 - (2x - 3y)^2$

Solution:

Using the difference of squares formula: $(a^2 - b^2) = (a + b)(a - b)$ $(2x + 3y)^2 - (2x - 3y)^2 = [(2x + 3y) + (2x - 3y)][(2x + 3y) - (2x - 3y)] = (4x)(6y) = 24xy$ Therefore, the simplified expression is $24xy$.

Q6. Simplify: $5(2x + 3) - 2(3x - 1) + 4x$

Solution:

Distribute the coefficients and combine like terms: $= 10x + 15 - 6x + 2 + 4x = 8x + 17$.

Q7. Simplify: $(3a - 2b)^2 - 4(a + b)^2$

Solution:

First, square the terms inside the parentheses: $= (9a^2 - 12ab + 4b^2) - 4(a^2 + 2ab + b^2)$
 Distribute the negative sign: $= 9a^2 - 12ab + 4b^2$

$- 4a^2 - 8ab - 4b^2$ Combine like terms: $= 5a^2 - 20ab$

Q8. Simplify the fraction $3/4 + 1/6$.

Solution:

Find a common denominator: $3/4 + 1/6 = (3 \times 3)/(4 \times 3) + (1 \times 2)/(6 \times 2) = 9/12 + 2/12 = 11/12$.
 Therefore, the simplified fraction is $11/12$.

Q9. Simplify the decimal 0.875.

Solution:

Express the decimal as a fraction: $0.875 = 875/1000$. Find the greatest common factor of 875 and 1000: $875 = 5 \times 5 \times 7 \times 2 \times 5$ $1000 = 2 \times 2 \times 5 \times 5 \times 5$ The greatest common factor is 125. Divide both numerator and denominator by 125: $875/1000 = (875 \div 125)/(1000 \div 125) = 7/8$.
 Therefore, the simplified decimal is $7/8$.

Q10. Simplify the fraction $(2/3)/(4/5)$.

Solution:

Invert the denominator and multiply: $(2/3)/(4/5) = (2/3) \times (5/4) = 10/12$. Reduce the fraction: $10/12 = (10 \div 2)/(12 \div 2) = 5/6$. Therefore, the simplified fraction is $5/6$.

Questions on Approximation

Q1. Approximate the value of 1.2×2.8 using rounding to one decimal place.

Solution:

To approximate, we can round each number to one decimal place: $1.2 \approx 1.2$ and $2.8 \approx 2.8$ Then, we can multiply: $1.2 \times 2.8 \approx 3.36$ Therefore, 1.2×2.8 approximates to 3.4 when rounded to one decimal place.

Q2: Approximate the value of $0.75 \div 0.3$ using rounding to two decimal places.

Solution:

To approximate, we can divide 0.75 by 0.3 using a calculator and round the answer to two decimal places: $0.75 \div 0.3 \approx 2.50$ Rounded to two decimal places, $2.50 \approx 2.50$. Therefore, $0.75 \div 0.3$ approximates to 2.50 when rounded to two decimal places.

Q3. Estimate the value of $\sqrt{(6.98 + 2.03)}$.

Solution:

We can use the linear approximation, which gives us $\sqrt{(6.98 + 2.03)} \approx \sqrt{7} + 1/14(2.03/\sqrt{7}) = 2.85$. Therefore, the approximate value is 2.85.

Q4. Approximate the value of $e^{(-0.01)}$.

Solution:

Using the Taylor series expansion of e^x , we have $e^{(-0.01)} \approx 1 - 0.01 + 0.005 = 0.995$. Therefore, the approximate value is 0.995.

Q5. Estimate the value of $\ln(1.1)$.

Solution:

Using the linear approximation, we have $\ln(1.1) \approx 0.1/1.1 = 0.0909$. Therefore, the approximate value is 0.0909.

Q6. $235.8 \div 0.0032 + 12.6 \times 4.9 = ?$

Solution:

Using the order of operations, we perform the division first: $(73500) + 12.6 \times 4.9 = ?$ Next, we perform the multiplication: $(73500) + 61.74 = ?$ Adding, we get: $73561.74 = ?$ Therefore, the solution is 73561.74.

Q7. $75.002 \times 1.98 - 89.997 + \sqrt{(32.1 \times 17.9)} = ?$

Solution:

Using the order of operations, we perform the multiplication first: $(148.502) - 89.997 + \sqrt{(574.59)} = ?$ Next, we perform the square root: $(148.502) - 89.997 + 23.977 = ?$ Adding and subtracting, we get: $82.482 = ?$ Therefore, the solution is 82.482.

Q8. $15.996 \times 7.998 + 18.002 \div 2.998 = ?$

Solution:

Using the order of operations, we perform the multiplication first: $(127.949008) + 18.002 \div 2.998 = ?$ Next, we perform the division: $(127.949008) + 6.006004 = ?$ Adding, we get: $133.955012 = ?$ Therefore, the solution is 133.955012.

Q9. $\sqrt{(16.003 \times 23.998)} - 12.997 \times 1.998 + 31.999 \div 3.998 = ?$

Solution:

Using the order of operations, we perform the multiplication first: $\sqrt{(384.023994)} - 25.960006 + 8.000000 = ?$ Next, we perform the square root: $19.599649 - 25.960006 + 8.000000 = ?$ Adding and subtracting, we get: $1.639643 = ?$ Therefore, the solution is 1.639643.

Q10. $43.999 \div 1.997 \times 2.998 + 13.002 \times 1.998 - 19.003 = ?$

Solution:

Using the order of operations, we perform the division first: $(44.0661) \times 2.998 + 13.002 \times 1.998 - 19.003 = ?$ Next, we perform the multiplication: $(132.023838) + 25.962996 - 19.003 = ?$ Adding and subtracting, we get: $139.983834 = ?$ Therefore, the solution is 139.983834.

Q1. The following table contains the data on train arrival and train departure from a station. Study the table and answer the questions that follow :

Delay	No. of Arrivals	No. of Departures
0	1250	1400
0 - 30	114	82
30 - 60	31	5
> 60	5	3
Total	1400	1490

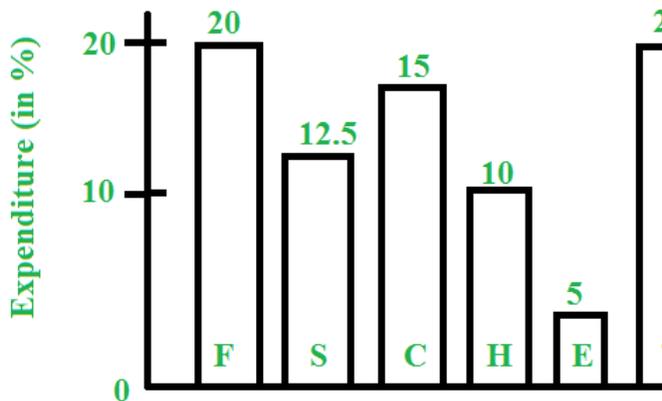
- a) Find the number of trains that arrived late
 b) Find the number of trains that departed late
 c) Find the percentage of late-arriving trains

Solution:

- a) Number of trains arriving late = $114 + 31 + 5 = 150$
 b) Number of trains departing late = $82 + 5 + 3 = 90$
 c) Percentage of late arriving trains = $(150 / 1400) \times 100 = 10.71 \%$

Question on Bar Graphs

Q2. Study the following bar graph and answer the questions that follow: Total monthly income = Rs. 50,000



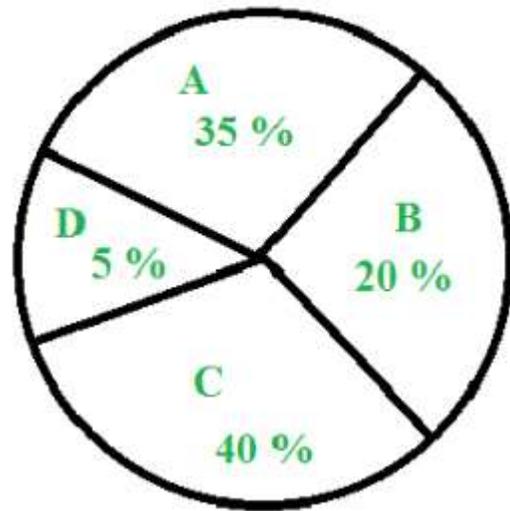
- a) What amount is spent on food ?
 b) How much more money is spent on clothing and housing together than on transportation?
 c) What percent of amount on food is spent as amount on education?

Solution :

- a) Food = 20 % of expenditure \Rightarrow Amount spent on food = 20% of Rs. 50,000 = Rs. 10,000
 b) Money spent on clothing and housing together = 25 % of Rs. 50,000 = Rs. 12,500
 Money spent on transportation = 20 % of Rs. 50,000 = Rs. 10,000 Therefore, more money spent on clothing and housing together than on transportation = Rs. 12,500-10,000 = Rs. 2,500
 c) Expenditure on food = 20 % Expenditure on education = 5 % Therefore, percent of amount on food spent as amount on education = $(5 / 20) \times 100 = 25 \%$

Question on Pie Charts

Q3. Study the pie chart below and answer the questions that follow :



The above pie chart shows the sales of four different types of articles in a shop.

- a) What is the central angle of type A ?
 b) If the total sale is 1200, what is the sale of B ?
 c) What is the difference between the central angle of C and D ?

Solution :

- a) Central angle of A = Percentage of A \times 360 degrees = $(35 / 100) \times 360 = 126$ degrees
 b) Sales of B = 20 % of 1200 = 240
 c) Difference between the central angle of C and D = 40 % of 360 – 5 % of 360 = 35 % of 360 = 126 degrees

Q4. A company conducted a survey of 500 customers to determine their satisfaction with the company's products. The results showed that 80% of customers were satisfied with the products. Of the satisfied customers, 60% were repeat customers. How many customers were repeat customers and satisfied with the products?

Solution :

To determine the number of repeat customers who were satisfied with the products, we need to first calculate the total number of satisfied customers. The survey showed that 80% of 500 customers were satisfied with the products, so the number of satisfied customers is: 80% of 500 = $0.8 \times 500 = 400$. Now we can find the

number of repeat customers who were satisfied with the products by multiplying the total number of satisfied customers by the percentage of satisfied customers who were repeat customers: $60\% \text{ of } 400 = 0.6 * 400 = 240$. Therefore, there were 240 repeat customers who were satisfied with the products.

Given below is a question and a set of statements. We have to find which of the given statements is required to reach the conclusion.

Q1. Who is the tallest among the brothers A, B, C, D ?

Statement 1 : C is shorter than only B

Statement 2 : D is taller than only A

- I) Statement 1 alone is sufficient
- II) Statement 2 alone is sufficient
- III) Both statement 1 and statement 2 together are sufficient
- IV) Both statement 1 and statement 2 even together are not sufficient

Solution : If we consider statement 1 only, we can safely conclude that B is the tallest of all. If we consider statement 2 only, we can safely conclude that A is the shortest of all. Therefore, statement 1 alone is sufficient to answer the question.

Q2. What is the value of 'x'?

Statement 1 : $x^2 + x - 6 = 0$

Statement 2 : $x \geq 0$

- I) Statement 1 alone is sufficient
- II) Statement 2 alone is sufficient
- III) Both statement 1 and statement 2 together are sufficient
- IV) Both statement 1 and statement 2 even together are not sufficient

Solution : If we consider statement 1 alone, we have $x^2 + x - 6 = 0 \Rightarrow x^2 + 3x - 2x - 6 = 0 \Rightarrow (x + 3)(x - 2) = 0 \Rightarrow x = -3, 2$ If we consider statement 2 alone, we have $x \geq 0$ Combining the two statements, we can safely say that $x = 2$ Therefore, both statement 1 and statement 2 together are sufficient but neither alone is sufficient.

Q3. What is the sum of the ages of John and Peter?

Statement 1: John is 5 years older than

Peter.

Statement 2: The average of their ages is 25.

- I) Statement 1 alone is sufficient
- II) Statement 2 alone is sufficient
- III) Both statement 1 and statement 2 together are sufficient
- IV) Both statement 1 and statement 2 even together are not sufficient

Answer: III) Both statement 1 and statement 2 together are sufficient

Q4. What is the value of x in the equation $x^2 + 6x + 9 = 0$?

Statement 1: $x = -3$

Statement 2: The discriminant of the equation is zero.

- I) Statement 1 alone is sufficient
- II) Statement 2 alone is sufficient
- III) Both statement 1 and statement 2 together are sufficient
- IV) Both statement 1 and statement 2 even together are not sufficient

Answer: III) Both statement 1 and statement 2 together are sufficient

Q5. Is triangle ABC an equilateral triangle?

Statement 1: The length of AB is equal to the length of AC.

Statement 2: The length of BC is equal to twice the length of AB.

- I) Statement 1 alone is sufficient
- II) Statement 2 alone is sufficient
- III) Both statement 1 and statement 2 together are sufficient
- IV) Both statement 1 and statement 2 even together are not sufficient

Answer: IV) Both statement 1 and statement 2 even together are not sufficient

Q6. What is the value of x in the equation $2x + 5 = 11$?

Statement 1: $x = 3$

Statement 2: x is a prime number.

- I) Statement 1 alone is sufficient
- II) Statement 2 alone is sufficient
- III) Both statement 1 and statement 2 together are sufficient
- IV) Both statement 1 and statement 2 even together are not sufficient

Answer: I) Statement 1 alone is sufficient

Q7. How much did Mr. Smith spend on his vacation?

Statement 1: Mr. Smith spent \$500 on his flight ticket.

Statement 2: Mr. Smith spent \$800 on his hotel stay.

- I) Statement 1 alone is sufficient
- II) Statement 2 alone is sufficient
- III) Both statement 1 and statement 2 together are sufficient
- IV) Both statement 1 and statement 2 even together are not sufficient

Answer: III) Both statement 1 and statement 2 together are sufficient

Q8. Is the given rectangle a square?

Statement 1: The length of each side of the rectangle is 8 cm

Statement 2: The diagonals of the rectangle are equal in length.

- I) Statement 1 alone is sufficient
- II) Statement 2 alone is sufficient
- III) Both statement 1 and statement 2 together are sufficient
- IV) Both statement 1 and statement 2 even together are not sufficient

Answer: III) Both statement 1 and statement 2 together are sufficient

Q9. What is the sum of the angles of a triangle?

Statement 1: One of the angles of the triangle is 60 degrees.

Statement 2: The triangle is an equilateral triangle.

- I) Statement 1 alone is sufficient
- II) Statement 2 alone is sufficient
- III) Both statement 1 and statement 2 together are sufficient
- IV) Both statement 1 and statement 2 even together are not sufficient

Answer: II) Statement 2 alone is sufficient

Q10. What is the total number of students in a class?

Statement 1: There are 20 boys in the class.

Statement 2: The ratio of girls to boys in the class is 2:5.

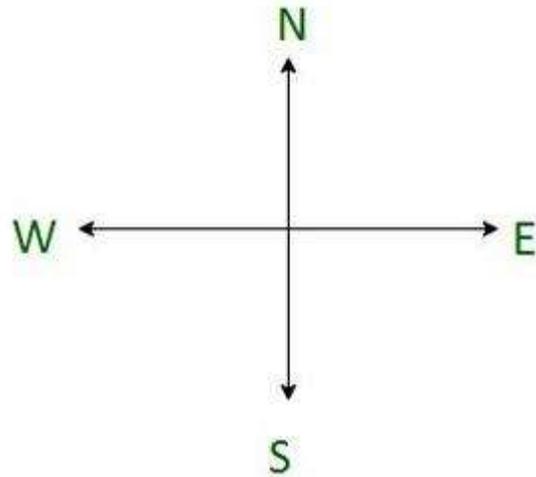
- I) Statement 1 alone is sufficient
- II) Statement 2 alone is sufficient
- III) Both statement 1 and statement 2 together are sufficient
- IV) Both statement 1 and statement 2 even together are not sufficient

Answer: III) Both statement 1 and statement 2 together are sufficient

Q 1. Ram starts from a point A walks 10 km north, then turns right and walks for 7 km, then turns right again and walks for another 10 km. And reaches point B. How far is Ram from the starting point?

Solution:

Now, according to the question, and the directions in mind,

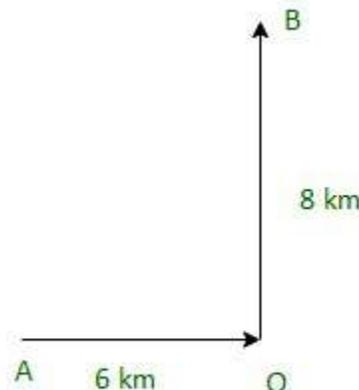


So, from the above image it is clear that ram is 7 km away from the starting point.

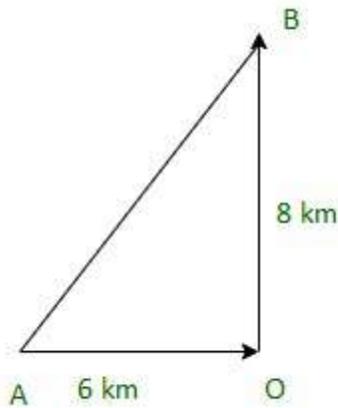
Q2: Sam started walking from point A towards East and walked for 6 km, then he turned to the left and walked for 8 km to reach point B. How far was he from the starting point?

Solution:

Now, according to the question,



Now, to the Distance between A and B = $\sqrt{6^2 + 8^2}$ (By Pythagoras' theorem)
 $= \sqrt{100}$
 $= 10 \text{ km}$



Therefore, the distance from the starting point is 10 km.

Q3: One morning after sunrise, Mahesh was standing facing a pole. The shadow of the pole fell exactly to his right. To which direction was he facing?

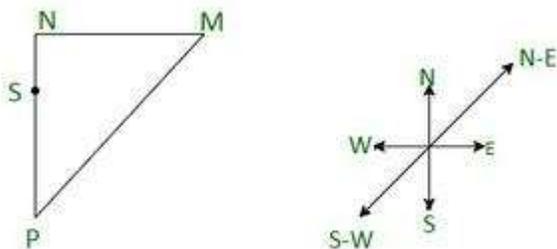
Solution:

The sun rises in the East (E) in the morning. As the shadow of Mahesh falls to his right. So he must be facing South. Hence, the answer is the south.

Q4: M is in the East of N, which is in the North of S. If P is in the South of S, then in which direction of M, is P?

Solution:

Let us understand through the diagram, which will clear the question more.



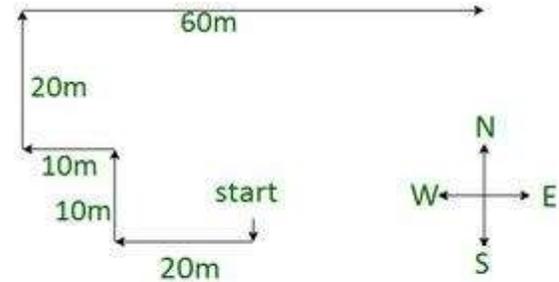
So, P is south-west of M.

Q5: You are facing south. You turn right and walk 20 m, then you turn right and walk 10m. Then turn left and walk for 10 m. then turn right and walk for 20 m. Then you turn

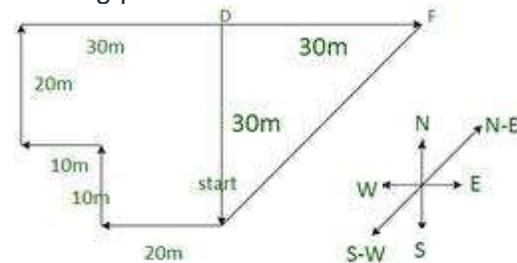
right again and walk 60 m. In which direction do you in from the starting point?

Solution:

First we have to make a sketch of all the given data and then we will analyze it to get the answer or to know the direction,



we start facing south, and after that follow the paths given in question above, Now, we have to find a direction from the starting point.



Here, we will also find the distance from start to F, distance = $\sqrt{30^2 + 30^2} = 30\sqrt{2}$. and the direction is N-E (north east).

Direction: Arrange the given words in a meaningful sequence and thus find the correct answer from alternatives.

1. Arrange the words given below in a meaningful sequence.

A. Birth, B. Death, C. Graduation, D. Degree, E. School

1. A, B, C, D, E
2. A, E, C, D, B
3. E, C, D, B, A
4. B, A, C, D, E

Answer: Option- 2

Birth> School> Graduation> Degree> Death

2. Arrange the words given below in a meaningful sequence.

A. Varanasi, B. Asia, C. Uttar Pradesh, D. Earth, E. India

1. A, B, C, D, E
2. A, E, C, D, B
3. A, C, E, B, D
4. B, A, C, D, E

Answer: Option- 3

Varanasi> Uttar Pradesh> India> Asia> Earth

3. Arrange the words given below in a meaningful sequence.

A. Heptagon, B. Square, C. Hexagon, D. Polygon, E. Triangle

1. E, B, C, A, D
2. A, E, C, B, D
3. E, C, A, B, D
4. B, A, C, D, E

Answer: Option- 1

Triangle> Square> Hexagon> Heptagon> Polygon

4. Arrange the words given below in their ascending order.

A. Weekly, B. Golden jubilee, C. Century, D. Bi-annual, E. Diamond jubilee

1. E, B, C, A, D
2. A, D, B, E, C
3. A, D, B, C, E
4. A, D, E, B, C

Answer: Option- 2

Weekly> Bi-annual> Golden jubilee> Diamond jubilee> Century

5. Arrange the words given below in their ascending order(according to size).

A. Laptop, B. Desktop, C. Tablet, D. Mobile phone, E. Pen drive

1. E, D, C, A, B
2. E, C, D, A, B
3. E, D, A, B, B
4. E, A, C, D, B

Answer: Option- 1

Pen drive> Mobile phone> Tablet> Laptop> Desktop

6. Arrange the words given below in meaningful sequence (according to the size)

A. Insect, B. Whale, C. lion, D. Dog, E. Elephant

1. A, C, D, E, B
2. A, B, C, E, D
3. A, D, E, C, B
4. A, D, C, E, B

Answer: Option- 4

Insect> Dog> Lion> Elephant> Whale

7. Arrange the words given below as per order in the dictionary.

A. Shortfall, B. Symposium, C. Spotlight, D. Symbol, E. Splitting

1. A, E, C, D, B
2. A, D, C, E, B
3. A, B, C, D, E
4. A, C, E, D, B

Answer: Option- 1

Shortfall> Splitting> Spotlight> Symbol> Symposium

8. Arrange the words given below as per order in the dictionary.

A. Abysmal, B. Abhor, C. Accolade, D. Abdicate, E. Abnegate

1. D, B, A, C, E
2. D, E, B, C, A
3. D, C, B, E, A
4. D, B, E, A, C

Answer: Option- 4

Abdicate> Abhor> Abnegate> Abysmal> Accolade

9. Arrange the words given below as per order in the dictionary.

A. Bastion, B. Random, C. Arduous, D. Banal, E. Bear

1. C, D, A, E, B
2. D, A, E, B, C
3. A, E, B, C, D
4. C, D, B, E, A

Answer: Option- 1

Arduous> Banal> Bastion> Bear> Random

10. Arrange the words given below as per order in the dictionary.

A. Deride, B. Delineate, C. Delude, D. Desiccate, E. Deluge

1. D, A, E, C, B
2. A, C, E, B, D
3. B, C, E, A, D
4. B, C, E, D, A

Answer: Option- 3

Delineate> Delude> Deluge> Deride> Desiccate

11. Arrange the words given below as per order in the dictionary.

A. Foible, B. Fervor, C. Flagrant, D. Felicity, E. Foment

1. D, B, C, A, E
2. B, C, A, E, D
3. C, A, E, B, D
4. D, B, A, C, E

Answer: Option- 1

Felicity> Fervor> Flagrant> Foible> Foment

12. Arrange the words given below as per order in the dictionary.

A. Illicit, B. Imminent, C. Immutable, D. Ideology, E. Inkpot

1. D, A, C, B, E
2. D, A, B, C, E
3. D, C, A, B, E
4. E, D, A, B, C

Answer: Option- 2

Ideology> Illicit> Imminent> Immutable> Inkpot

13. Arrange the words given below as per order in the dictionary.

A. Novel, B. Nepotism, C. Noxious, D. Nefarious, E. Nominal

1. D, B, E, A, C

2. B, A, C, E, D

3. D, B, A, E, C

4. D, C, A, E, B

Answer: Option- 1

Nefarious> Nepotism> Nominal> Novel> Noxious

14. Arrange the words given below as per order in the dictionary.

A. Officious, B. Ostensible, C. Obfuscate, D. Opulent, E. Oblivion

1. A, E, C, D, B
2. C, A, E, D, B
3. C, E, A, D, B
4. C, E, A, B, D

Answer: Option- 3

Obfuscate> Oblivion> Officious> Opulent>Ostensible

15. Arrange the words given below as per order in the dictionary.

A. Tout, B. Transfer, C. Torpor, D. Tenet, E. Toy

1. D, C, E, A, B
2. D, C, A, E, B
3. D, A, C, E, B
4. D, E, A, C, B

Answer: Option- 2

Tenet> Torpor> Tout> Toy> Transfer

16. Arrange the words given below as per order in the dictionary.

A. Verbal, B. Volition, C. Visionary, D. Vapid, E. Vitiate

1. D, E, C, A, B
2. D, C, A, E, B
3. D, A, C, E, B
4. D, A, E, C, B

Answer: Option- 3

Vapid> Verbal> Visionary> Vitiate> Volition

17. Arrange the words given below as per order in the dictionary.

A. Wistful, B. Watch, C. Willful, D. Wanton, E. Wanted

1. E, D, B, C, A
2. A, D, B, C, E
3. E, D, C, B, A
4. E, B, D, C, A

Answer: Option- 1

Wanted> Wanton> Watch> Willful> Wistful

18. Arrange the words given below in a meaningful sequence.

A. Manager, B. Chief Manager, C. Chief Executive Officer, D. Deputy General Manager, E. Clerk

1. E, A, C, D, B
2. E, A, B, D, C
3. E, D, B, A, C
4. E, A, D, B, C

Answer: Option- 2

Clerk > Manager > Chief Manager > Deputy General Manager > Chief Executive Officer

19. Arrange the words given below in a meaningful sequence.

A. Bed, B. Blanket, C. Colony, D. Home, E. Room

1. B, E, A, D, C
2. B, A, E, C, D
3. A, E, C, B, D
4. B, A, E, D, C

Answer: Option- 4

Blanket > Bed > Room > Home > Colony

20. Arrange the words given below in a meaningful sequence.

A. Train, B. Bus, C. Bike, D. Car, E. Cycle

1. E, C, B, D, A
2. E, C, D, B, A
3. D, C, B, E, A
4. E, C, D, A, B

Answer: Option- 2

Cycle > Bike > Car > Bus > Train

Example 1: Essential Part: harvest

Options:

- A) autumn
- B) stockpile
- C) tractor
- D) crop

Answer: D) crop

Explanation: In the context of harvesting, the essential part is the "crop." Harvesting is the process of gathering crops when they are ripe, so the crop is the key element in this scenario.

Example 2: Essential Part: recipe

Options:

- A) ingredients
- B) kitchen

- C) chef
- D) restaurant

Answer: A) ingredients

Explanation: In the context of a recipe, the essential part is the "ingredients." A recipe is a set of instructions for preparing a dish, and the ingredients are the key components required to make that dish.

Example 3: Essential Part: puzzle

Options:

- A) solution
- B) paper
- C) pen
- D) book

Answer: A) solution

Explanation: In the context of a puzzle, the essential part is the "solution." A puzzle challenges you to find the correct solution or answer, making it the crucial element in this scenario.

Example 4: Essential Part: novel

Options:

- A) author
- B) cover
- C) bookmark
- D) library

Answer: A) author

Explanation: In the context of a novel, the essential part is the "author." The author creates and writes the novel, making them the key element in the creation of the literary work.

Solved Example 5: Essential Part: computer

Options:

- A) keyboard
- B) monitor
- C) mouse
- D) electricity

Answer: D) electricity

Explanation: In the context of a computer, the essential part is "electricity." Without electricity, a computer cannot function, and it is the power source that is vital to its operation.

Solved Example 6: Essential Part: car

Options:

- A) wheels
- B) steering wheel
- C) engine
- D) radio

Answer: C) engine

Explanation: In the context of a car, the essential part is the “engine.” The engine is what powers the car and allows it to move, making it the critical component in this scenario.

Solved Example 7: Essential Part: painting

Options:

- A) canvas
- B) frame
- C) paintbrush
- D) gallery

Answer: C) paintbrush

Explanation: In the context of a painting, the essential part is the “paintbrush.” The paintbrush is the tool used to create the artwork and is crucial to the painting process.

Solved Example 8: Essential Part: smartphone

Options:

- A) screen
- B) charger
- C) headphones
- D) camera

Answer: A) screen

Explanation: In the context of a smartphone, the essential part is the “screen.” The screen is where the user interacts with the device and accesses its features, making it a fundamental component.

Solved Example 9: Essential Part: speech

Options:

- A) audience
- B) microphone
- C) podium
- D) applause

Answer: A) audience

Explanation: In the context of a speech, the essential part is the “audience.” A speech is typically delivered to an audience, and their presence and attention are vital for the speech to have its intended impact.

Solved Example 10: Essential Part: recipe

Options:

- A) oven
- B) timer
- C) instructions
- D) chef’s hat

Answer: C) instructions

Explanation: In the context of a recipe, the essential part is the “instructions.” A recipe

provides step-by-step instructions for preparing a dish, making the instructions a crucial element for cooking.

Q1. A rectangular plot has its length and width ratio 4:1. At 10km/hr speed, Ankit was cycling along the plot’s edge. In six minutes, he completes one round of the plot. Determine the plot’s area.

- A. 52000 m²
- B. 51500 m²
- C. 53500 m²
- D. 52500 m²

Solution:

Distance covered by Rahul in 6 minutes = $10000/60 \times 6 = 1000$ m

[10 km/hr = 10000/60 m/min]

Therefore, perimeter = 1000m

Length: Breadth = 4:1

Therefore, Length = 4x and breadth = x

Then, Perimeter of the Rectangle = $2(l + b) = 1000$

$2(4x + x) = 1000$

$2(5x) = 1000$

$10x = 1000$

$x = 100$

Length = $4x = 4 \times 100 = 400$

Breadth = $x = 100 = 100$

Therefore, Area = $l \times b = 400 \times 100 = 40000$ m²

Correct option: D

Q2. The height of a trapezium-shaped wall is 8 meters. The trapezium’s parallel sides measure 4 and 6 meters. Find the cost of painting a whole wall if the price per square meter is Rs. 50.

- A. Rs. 400
- B. Rs. 420
- C. Rs. 540
- D. Rs. 450

Solution:

Area of trapezium = $1/2 \times (\text{Sum of parallel sides}) \times \text{Distance between them}$

Area of trapezium = $\frac{1}{2} * (4 + 6) * 8$
 Area of trapezium = $\frac{1}{2} * (18)$
 Area of trapezium = 9 square meter
 Rate of painting per square meter is Rs. 50
 Therefore, to paint 9 square meter, total cost of painting = $9 * 50 = \text{Rs. } 450$

Correct option: D

Q3. A rope makes 120 rounds of a cylinder with a base radius of 10 cm. How many times it can go around a cylinder with a base radius of 20 cm?

- A. 70 cm
- B. 60 cm
- C. 45 cm
- D. 50 cm

Solution:

Let the round be x
 If radius is more, then rounds will be less as the length of the ropes remains the same

$$L = 2 * \pi * 10 * 120 \text{ ---(1)}$$

Similarly,

$$L = 2 * \pi * 20 * x \text{ ---(2)}$$

From (1) and (2)

$$10 * 120 = 20 * x$$

$$\Rightarrow x = 60$$

Correct option: B

Q4. A 10 cm cube was divided into as n number of cubes of side length 1 cm cubes . Determine the total surface area ratio of the larger cube to the total surface areas of the smaller cubes.

- A. 100:1
- B. 10:1
- C. 1:10
- D. 1:100

Solution:

$$\text{Volume of the original cube} = 10^3 = 1000 \text{ cm}^3$$

Volume of each smaller cubes = 1 cm^3 . It means there are 1000 smaller cubes.

$$\text{Surface area of the cube} = 6a^2$$

$$\text{Surface area of the larger cube} = 6a^2 = 6 * 10^2 = 6 * 100 = 600$$

Surface area of one smaller cubes = $6 (1^2) = 6$
 Now, surface area of all 1000 cubes = $1000 * 6 = 6000$

Therefore,

Required ratio = Surface area of the larger cube: Surface area of smaller cubes

$$= 600: 6000$$

$$= 1:10$$

Correct option: C

Q5. After being submerged in water, a rectangular piece of cloth was found to have lost 20% of its length and 10% of its width. Calculate the overall percentage of the rectangular piece of cloth's area reduction.

- A. 75% Decrease
- B. 28 % Increase
- C. 28 % Decrease
- D. 20% Decrease

Solution:

Let the original length = l

Let the original breadth = b

$$\text{Original Area} = l * b$$

$$\text{New length} = 80/100 l$$

$$\text{New breadth} = 90/100 b$$

$$\text{Decrease in the area} = lb - 80/100 l * 90/100 b$$

$$\text{Decrease in the area} = 7/25 lb$$

$$\text{Decrease percentage} = 7/25 lb * 7/lb * 100$$

$$\text{Decrease percentage} = 700/25 = 28\%$$

Correct Option: C

Q6. ABCD is a square. AD is tangent to a circle with a radius r and $OE = ED$. What is the ratio of the area of a circle to the area of the square?

- a) $\pi/3$
- b) $\pi r^2/3$
- c) $\pi r^2/4$
- d) $\pi r^2/2$

Solution:

$$OD^2 = OA^2 + AD^2$$

$$(2r)^2 = r^2 + AD^2$$

Thus PQ, which is also the side of square, is equal to $r\sqrt{3}$. The area of square

becomes: $3r^2$

Hence, the ratio of the area of circle to square is:

$$\frac{\text{area of circle}}{\text{area of square}} = \frac{\pi r^2}{3r^2} = \frac{\pi}{3}$$

Correct Option: A

Q7. A kite is in the shape of a square with a diagonal 48cm attached to a triangle of the base 4cm and height 6cm. How much paper has been used to make it?

- a) 200 cm²
- b) 288 cm²
- c) 300 cm²
- d) 325 cm²

Solution:

$$\begin{aligned} \text{Area of square} &= \frac{1}{2}(\text{diagonal})^2 \\ &= \frac{1}{2} * (24)^2 \\ &= 288 \text{ cm}^2 \end{aligned}$$

$$\begin{aligned} \text{Area of triangle} &= \frac{1}{2} * \text{base} * \text{height} \\ &= \frac{1}{2} * 4 * 6 = 12 \text{ cm}^2 \end{aligned}$$

$$\text{Total area} = 288 + 12 = 300 \text{ cm}^2$$

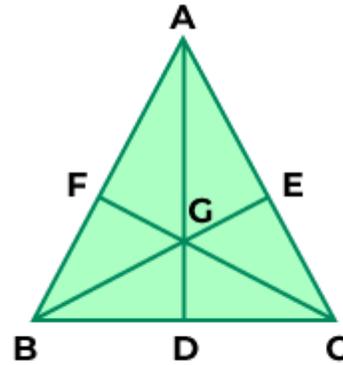
Correct Option: C

Q8. If G is the centroid and AD, BE, CF are three medians of triangle ABC with area 72 cm², then the area of triangle BDG is:

- a) 12 cm²
- b) 16 cm²
- c) 24 cm²
- d) 8 cm²

Solution:

Given



G is the centroid and AD, BE, CF are three medians and the area of $\triangle GEC = 12 \text{ cm}^2$. As, we know the median divides the triangle into 6 triangles of equal area

$$\text{Hence, area of the quadrilateral BDGF} = 2 * \triangle GEC = 2 * 12 \text{ cm}^2$$

$$\text{Area of the quadrilateral BDGF} = 24 \text{ cm}^2$$

Correct Option: 24 cm²

Q9. If the perimeter of rhombus is 150 cm and length of one diagonal is 50 cm. Then find the length of second diagonal and area of rhombus.

- (a) 425 cm²
- (b) 525 cm²
- (c) 625 cm²
- (d) 725 cm²

Solution:

$$\text{Perimeter} = 4a = 150$$

$$a = 75 \text{ cm}$$

$$4a^2 = d_1^2 + d_2^2$$

$$75^2 = 50^2 + d_2^2$$

$$d_2 = 25 \text{ cm}$$

$$\text{Area} = \frac{1}{2}(d_1 d_2) = 625 \text{ cm}^2$$

Correct Option: C

Q 10. How many copper rods, each measuring 7 metres in length and 2 cm in diameter, can be produced using 0.88 cubic

metres of copper?

- (a)145
- (b)345
- (c)380
- (d)400

Solution:

Volume of 1 rod =

$$\left(\frac{22}{7} \times \frac{1}{100} \times \frac{1}{100} \times 7\right) \text{ m}^3$$

Volume of 1 rod

Volume of copper = 0.88 m^3
Number of rods =

$$\left(0.88 \times \frac{10000}{22}\right) = 400.$$

Number of rods

Correct Option: D

Directions: Solve the following Cause and Effect Reasoning Questions by choosing the correct option:

Q1. Statement 1: The company has decided to increase the salary of its employees.

Statement 2: The employees threatened to go on a strike if their demands for a salary hike were not met.

- a. Statement I is the cause and statement II is its effect
- b. Statement II is the cause and statement I is its effect
- c. Both the statements I and II are independent causes
- d. Both the statements I and II are effects of independent causes
- e. Both the statements I and II are effects of some common cause

Answer: a. Statement I is the cause and statement II is its effect

Q2. Statement 1: The government has imposed a fine on people who litter in public places.

Statement 2: The cleanliness of public places has improved significantly in the recent past.

- a. Statement I is the cause and statement II is its effect
- b. Statement II is the cause and statement I is its effect
- c. Both the statements I and II are independent causes
- d. Both the statements I and II are effects of independent causes
- e. Both the statements I and II are effects of some common cause

Answer: a. Statement I is the cause and statement II is its effect

Q3. Statement 1: The use of plastic bags has been banned in the city.

Statement 2: The pollution levels in the city have decreased in the recent past.

- a. Statement I is the cause and statement II is its effect
- b. Statement II is the cause and statement I is its effect
- c. Both the statements I and II are independent causes
- d. Both the statements I and II are effects of independent causes
- e. Both the statements I and II are effects of some common cause

Answer: a. Statement I is the cause and statement II is its effect

Q4. Statement 1: The prices of petrol and diesel have increased in the country.

Statement 2: The inflation rate has gone up in the recent past.

- a. Statement I is the cause and statement II is its effect
- b. Statement II is the cause and statement I is its effect
- c. Both the statements I and II are independent causes
- d. Both the statements I and II are effects of independent causes
- e. Both the statements I and II are effects of some common cause

Answer: a. Statement I is the cause and statement II is its effect

Q5. Statement 1: The government has announced a reduction in the interest rates.
Statement 2: The number of people taking loans has increased in the recent past.

- a. Statement I is the cause and statement II is its effect
- b. Statement II is the cause and statement I is its effect
- c. Both the statements I and II are independent causes
- d. Both the statements I and II are effects of independent causes
- e. Both the statements I and II are effects of some common cause

Answer: a. Statement I is the cause and statement II is its effect

Q6. Statement 1: The sales of smartphones have increased significantly in the recent past.
Statement 2: The use of social media platforms has also increased significantly in the recent past.

- a. Statement I is the cause and statement II is its effect
- b. Statement II is the cause and statement I is its effect
- c. Both the statements I and II are independent causes
- d. Both the statements I and II are effects of

- e. Both the statements I and II are effects of some common cause

Answer: e. Both the statements I and II are effects of some common cause

Q7. Statement 1: A new law was passed to increase the penalties for drunk driving.
Statement 2: The number of drunk driving accidents has decreased significantly in the past year.

- a. Statement 1 is the cause and statement 2 is its effect b.
- Statement 2 is the cause and statement 1 is its effect
- c. Both the statements 1 and 2 are independent causes
- d. Both the statements 1 and 2 are effects of independent causes
- e. Both the statements 1 and 2 are effects of some common cause

Answer: a. Statement 1 is the cause and statement 2 is its effect

Q8. Statement 1: A new fitness program was introduced at the company.
Statement 2: The number of sick days taken by employees has decreased.

- a. Statement 1 is the cause and statement 2 is its effect
- b. Statement 2 is the cause and statement 1 is its effect
- c. Both the statements 1 and 2 are independent causes
- d. Both the statements 1 and 2 are effects of independent causes
- e. Both the statements 1 and 2 are effects of some common cause

Answer: a. Statement 1 is the cause and statement 2 is its effect

Q9. Statement 1: The factory was shut down due to environmental concerns.

Statement 2: The unemployment rate in the city increased.

- a. Statement 1 is the cause and statement 2 is its effect
- b. Statement 2 is the cause and statement 1 is its effect
- c. Both the statements 1 and 2 are independent causes
- d. Both the statements 1 and 2 are effects of independent causes
- e. Both the statements 1 and 2 are effects of some common cause

Answer: a. Statement 1 is the cause and statement 2 is its effect

Q10. Statement 1: The company increased salaries of its employees.

Statement 2: The productivity of the employees increased.

- a. Statement 1 is the cause and statement 2 is its effect
- b. Statement 2 is the cause and statement 1 is its effect
- c. Both the statements 1 and 2 are independent causes
- d. Both the statements 1 and 2 are effects of independent causes
- e. Both the statements 1 and 2 are effects of some common cause

Answer: a. Statement 1 is the cause and statement 2 is its effect

Example 1:

Assertion (A): Birds have feathers.

Reason (R): Feathers help birds to fly.

Options:

- A – Both A and R are true, and R is the correct explanation of A.
- B – Both A and R are true, but R is NOT the correct explanation of A.
- C – A is true, but R is false.
- D – A is false, but R is true.

Answer: A – Both A and R are true, and R is the correct explanation of A.

Explanation: Both the assertion and reason are true. Feathers indeed help birds fly, as they provide lift and control during flight.

Example 2:

Assertion (A): The Earth orbits the Sun.

Reason (R): The Sun is much larger than the Earth.

Options:

- A – Both A and R are true, and R is the correct explanation of A.
- B – Both A and R are true, but R is NOT the correct explanation of A.
- C – A is true, but R is false.
- D – A is false, but R is true.

Answer: A – Both A and R are true, and R is the correct explanation of A.

Explanation: Both the assertion and reason are true. The Earth's orbit around the Sun is due to the Sun's gravitational pull, which is possible because the Sun is much larger than the Earth.

Example 3:

Assertion (A): Plants conduct photosynthesis.

Reason (R): Photosynthesis is essential for plant growth.

Options:

- A – Both A and R are true, and R is the correct explanation of A.
- B – Both A and R are true, but R is NOT the correct explanation of A.
- C – A is true, but R is false.
- D – A is false, but R is true.

Answer: A – Both A and R are true, and R is the correct explanation of A.

Explanation: Both the assertion and reason are true. Photosynthesis is a vital process for plant growth and involves the conversion of sunlight into energy.

Example 4:

Assertion (A): Water boils at 100 degrees Celsius at sea level.

Reason (R): Atmospheric pressure affects the boiling point of water.

Options:

- A – Both A and R are true, and R is the correct explanation of A.

- B – Both A and R are true, but R is NOT the correct explanation of A.
- C – A is true, but R is false.
- D – A is false, but R is true.

Answer: A – Both A and R are true, and R is the correct explanation of A.

Explanation: Both the assertion and reason are true. The boiling point of water varies with changes in atmospheric pressure, and at sea level, it boils at 100 degrees Celsius.

Example 5:

Assertion (A): Oxygen is necessary for combustion.

Reason (R): Combustion is a chemical reaction involving the release of energy.

Options:

- A – Both A and R are true, and R is the correct explanation of A.
- B – Both A and R are true, but R is NOT the correct explanation of A.
- C – A is true, but R is false.
- D – A is false, but R is true.

Answer: A – Both A and R are true, and R is the correct explanation of A.

Explanation: Both the assertion and reason are true. Oxygen is a crucial component of combustion, which is indeed a chemical reaction releasing energy.

Example 6:

Assertion (A): Metal objects expand when heated.

Reason (R): Heating increases the kinetic energy of metal atoms.

Options:

- A – Both A and R are true, and R is the correct explanation of A.
- B – Both A and R are true, but R is NOT the correct explanation of A.
- C – A is true, but R is false.
- D – A is false, but R is true.

Answer: A – Both A and R are true, and R is the correct explanation of A.

Explanation: Both the assertion and reason are true. Heating metal objects increases the kinetic energy of their atoms, causing expansion.

Example 7:

Assertion (A): The Moon has gravitational pull.

Reason (R): Gravity is a fundamental force of nature.

Options:

- A – Both A and R are true, and R is the correct explanation of A.
- B – Both A and R are true, but R is NOT the correct explanation of A.
- C – A is true, but R is false.
- D – A is false, but R is true.

Answer: A – Both A and R are true, and R is the correct explanation of A.

Explanation: Both the assertion and reason are true. The Moon's gravitational pull is due to the fundamental force of gravity.

Example 8:

Assertion (A): Sound travels faster in solids than in gases.

Reason (R): Solids have a higher density than gases.

Options:

- A – Both A and R are true, and R is the correct explanation of A.
- B – Both A and R are true, but R is NOT the correct explanation of A.
- C – A is true, but R is false.
- D – A is false, but R is true.

Answer: A – Both A and R are true, and R is the correct explanation of A.

Explanation: Both the assertion and reason are true. Sound travels faster in denser materials, such as solids, due to the closer arrangement of particles.

Example 9:

Assertion (A): Adding salt to water lowers its freezing point.

Reason (R): Salt disrupts the formation of ice crystals in water.

Options:

- A – Both A and R are true, and R is the correct explanation of A.
- B – Both A and R are true, but R is NOT the correct explanation of A.
- C – A is true, but R is false.
- D – A is false, but R is true.

Answer: A – Both A and R are true, and R is the correct explanation of A.

Explanation: Both the assertion and reason are true. Adding salt lowers the freezing point of

water by interfering with the formation of ice crystals.

Example 10:

Assertion (A): Human beings require oxygen to survive.

Reason (R): Oxygen is essential for cellular respiration, which produces energy.

Options:

- A – Both A and R are true, and R is the correct explanation of A.
- B – Both A and R are true, but R is NOT the correct explanation of A.
- C – A is true, but R is false.
- D – A is false, but R is true.

Answer: A – Both A and R are true, and R is the correct explanation of A.

Explanation: Both the assertion and reason are true. Humans require oxygen for cellular respiration, a process that produces energy necessary for survival.

1. If Sarah has a red pen, a blue pen, and a green pen, how many different ways can she arrange them in a row on her desk?

- a. 3 ways
- b. 6 ways
- c. 9 ways
- d. 12 ways
- e. 24 ways

Answer: a. 3 ways

Explanation:

Sarah can arrange the pens in 3! (3 factorial) ways because there are three pens.

$$3! = 3 \times 2 \times 1 = 6 \text{ ways}$$

So, the correct answer is (a): 3 ways.

2. In a game of chess, which piece can move diagonally and capture opponents?

- a. Bishop
- b. Knight
- c. Rook
- d. Queen
- e. King

Answer: a. Bishop

Explanation:

The piece that can move diagonally and capture opponents in chess is the bishop.

So, the correct answer is (a): Bishop.

3. If a rectangle has a length of 8 units and a width of 4 units, what is its perimeter?

- a. 12 units
- b. 16 units
- c. 24 units
- d. 32 units
- e. 64 units

Answer: c. 24 units

Explanation:

The perimeter of a rectangle is calculated as 2 times the sum of its length and width.

$$\text{Perimeter} = 2 \times (8 \text{ units} + 4 \text{ units}) = 2 \times 12 \text{ units} = 24 \text{ units}$$

So, the correct answer is (c): 24 units.

4. If you flip a fair coin twice, what is the probability of getting heads on both flips?

- a. 1/4
- b. 1/2
- c. 3/4
- d. 1/3
- e. 2/3

Answer: a. 1/4

Explanation:

When flipping a fair coin twice, the probability of getting heads on each flip is 1/2.

To find the probability of both events happening, you multiply their individual probabilities.

Probability of heads on the first flip: 1/2

Probability of heads on the second flip: 1/2

$$\text{Probability of both flips being heads: } (1/2) \times (1/2) = 1/4$$

So, the correct answer is (a): 1/4.

5. If a train travels from Station A to Station B at a speed of 60 mph and returns from Station B to Station A at a speed of 40 mph, what is the average speed for the entire round trip?

- a. 50 mph
- b. 48 mph
- c. 45 mph
- d. 52 mph
- e. 55 mph

Answer: a. 48 mph

Explanation:

To find the average speed for the entire round trip, you can use the formula:

$$\text{Average Speed} = (2 * \text{Speed1} * \text{Speed2}) / (\text{Speed1} + \text{Speed2}). \text{ We can get this formula}$$

from the simple formula of total-distance / total-time

$$\text{Average Speed} = (2 * 60 \text{ mph} * 40 \text{ mph}) / (60 \text{ mph} + 40 \text{ mph}) = (4800 \text{ mph}^2) / (100 \text{ mph}) = 48 \text{ mph}$$

So, the correct answer is (a): 48 mph.

6. In a deck of playing cards, what is the total number of cards with hearts as their suit?

- a. 13 cards
- b. 26 cards
- c. 39 cards
- d. 52 cards
- e. 4 cards

Answer: a. 13 cards

Explanation:

In a standard deck of playing cards, there are 13 cards in each suit (hearts, diamonds, clubs, and spades).

So, the total number of cards with hearts as their suit is 13 cards.

So, the correct answer is (a): 13 cards.

7. If a car travels 120 miles in 2 hours, what is its average speed in miles per hour (mph)?

- a. 40 mph
- b. 60 mph
- c. 80 mph
- d. 100 mph
- e. 120 mph

Answer: b. 60 mph

Explanation:

$$\text{Average Speed} = \text{Total Distance} / \text{Total Time}$$

$$\text{Average Speed} = 120 \text{ miles} / 2 \text{ hours} = 60 \text{ mph}$$

So, the correct answer is (b): 60 mph.

8. If you have a pizza divided into 8 equal slices, and you eat 3 slices, how many slices are left?

- a. 1 slice
- b. 2 slices
- c. 3 slices
- d. 4 slices
- e. 5 slices (Answer)

Answer: e. 5 slices

Explanation:

If you eat 3 slices out of 8, the number of slices left is $8 - 3 = 5$ slices.

So, the correct answer is (e): 5 slices.

9. Which planet in our solar system is known as the “Red Planet”?

- a. Earth
- b. Venus
- c. Mars
- d. Jupiter
- e. Saturn

Answer: c. Mars

Explanation:

Mars is often referred to as the “Red Planet” due to its reddish appearance caused by iron oxide (rust) on its surface.

So, the correct answer is (c): Mars.

10. If a rectangle has a length of 12 units and a width of 6 units, what is its area in square units?

- a. 18 square units
- b. 24 square units
- c. 36 square units
- d. 48 square units
- e. 72 square units

Answer: d. 72 square units

Explanation:

The area of a rectangle is calculated as the product of its length and width.

$$\text{Area} = \text{Length} \times \text{Width} = 12 \text{ units} \times 6 \text{ units} = 72 \text{ square units.}$$

So, the correct answer is (d): 72 square units.

1. In the series 2, 6, 18, 54, what will be the 8th term?

- a) 4370
- b) 4374
- c) 7443
- d) 7434

Answer: b) 4374

Explanation: Each term is obtained by multiplying the previous term by 3. So, to find the 8th term, we continue this pattern: $54 * 3 = 162$, $162 * 3 = 486$, $486 * 3 = 1458$, $1458 * 3 = 4374$.

2. What comes next in the series: 5, 10, 20, 40, ...?

- a) 60
- b) 80
- c) 100
- d) 120

Answer: c) 100

Explanation: Each term is obtained by multiplying the previous term by 2. So, to find the next term, we continue this pattern: $40 * 2 = 80$, $80 * 2 = 160$, and so on. Therefore, the next term is $40 * 2 = 80$.

3. What is the missing number in the series:

3, 8, 15, __, 35?

- a) 18
- b) 22
- c) 24
- d) 28

Answer: c) 24

Explanation: The series adds consecutive prime numbers starting from 2: $3 (2+1)$, $8 (3+5)$, $15 (5+10)$, $24 (7+17)$, $35 (11+24)$.

4. What comes next in the series: 1, 4, 9, 16, ...?

- a) 25
- b) 30
- c) 36
- d) 49

Answer: d) 49

Explanation: This series represents perfect squares of consecutive natural numbers: $1 (1^2)$, $4 (2^2)$, $9 (3^2)$, $16 (4^2)$, and so on. Therefore, the next term is $5^2 = 25$.

5. What is the missing number in the series:

2, 5, 11, __, 35, 71?

- a) 17
- b) 23
- c) 29
- d) 47

Answer: b) 23

Explanation: The series follows a pattern where each number is doubled and 1 is added. So, to find the missing number, we double 11 and add 1: $11 * 2 + 1 = 23$.

6. What comes next in the series: 1, 3, 7, 15, ...?

- a) 25
- b) 27
- c) 31
- d) 63

Answer: d) 63

Explanation: This series represents a pattern where each number is multiplied by 2 and then 1 is added. So, to find the next term, we double 15 and add 1: $15 * 2 + 1 = 31$, and so on.

7. What is the missing number in the series: 12, 22, 32, __, 52, 62?

- a) 40
- b) 42
- c) 45
- d) 46

Answer: b) 42

Explanation: The series increases by 10 each time. So, to find the missing number, we add 10 to 32: $32 + 10 = 42$.

8. What comes next in the series: 144, 121, 100, 81, ...?

- a) 64
- b) 49
- c) 36
- d) 25

Answer: a) 64

Explanation: This series represents the squares of consecutive decreasing natural numbers: $12^2 = 144$, $11^2 = 121$, $10^2 = 100$, $9^2 = 81$, and so on. Therefore, the next term is $8^2 = 64$.

9. What is the missing number in the series: 2, 6, 12, __, 30, 42?

- a) 18
- b) 20
- c) 24
- d) 36

Answer: c) 24

Explanation: The series follows a pattern where each number is multiplied by 3, and then 6 is added. So, to find the missing number, we multiply 12 by 3 and add 6: $12 * 3 + 6 = 42$.

10. What comes next in the series: 3, 6, 18, 72, ...?

- a) 216
- b) 324
- c) 432
- d) 648

Answer: d) 648

Explanation: This series represents a pattern where each number is multiplied by 2, and then the result is multiplied by 3. So, to find the next term, we take $72 * 2 * 3 = 432 * 3 = 1296$, and so on, making the next term $1296 * 2 * 3 = 648$.

Theme Detection Questions with Answers

Example 1.

In the novel “To Kill a Mockingbird” by Harper Lee, the central theme revolves around racial injustice and discrimination in a small Southern town. The story follows the experiences of a young girl named Scout Finch and her family, who become entangled in a racially charged trial. Throughout the narrative, the author highlights the deep-seated prejudices and biases that exist within society.

Q: What is the central theme of “To Kill a Mockingbird”?

- A) *Cooking recipes*
- B) *Adventure and exploration*
- C) *Racial injustice and discrimination*
- D) *Time travel escapades*

Answer: C) Racial injustice and discrimination

Explanation: In the provided information, it is explicitly mentioned that the central theme of “To Kill a Mockingbird” revolves around racial injustice and discrimination in a small Southern town. The story highlights the deep-seated prejudices and biases within society, making option C the correct choice.

Example 2.

“The Shawshank Redemption” is a classic film that explores the theme of hope and redemption. The story is set within the confines of a maximum-security prison and follows the journey of Andy Dufresne, a banker who maintains his hope and ultimately finds redemption through an unexpected friendship.

Q: What is the primary theme of “The Shawshank Redemption”?

- A) *Gardening techniques*
- B) *Fear and isolation*
- C) *Hope and redemption*
- D) *Financial success*

Answer: C) Hope and redemption

Explanation: The paragraph states that the central theme of “The Shawshank Redemption” is hope and redemption. Andy Dufresne’s journey in a maximum-security prison and his ultimate redemption through an unexpected friendship emphasize this theme.

Example 3.

In Shakespeare’s famous play “Hamlet,” the central theme revolves around the concept of revenge. Hamlet, the protagonist, seeks to

avenge his father’s murder by his uncle, King Claudius. The play delves into the moral and psychological complexities of revenge.

Q: What is the primary theme explored in “Hamlet”?

- A) *Love and marriage*
- B) *Time travel adventures*
- C) *Revenge*
- D) *Magic and sorcery*

Answer: C) Revenge

Explanation: The provided information explicitly mentions that the central theme of Shakespeare’s “Hamlet” revolves around the concept of revenge. Hamlet’s quest to avenge his father’s murder by his uncle, King Claudius, is a central focus of the play.

Example 4.

Maya Angelou’s poem “Still I Rise” is a powerful expression of the theme of resilience and strength. Through her verses, Angelou celebrates the indomitable human spirit that can overcome adversity and discrimination.

Q: What is the central theme of Maya Angelou’s poem “Still I Rise”?

- A) *Space exploration*
- B) *Resilience and strength*
- C) *Cooking and recipes*
- D) *Scientific discoveries*

Answer: B) Resilience and strength

Explanation: The paragraph mentions that the central theme of Maya Angelou’s poem “Still I Rise” is resilience and strength. The poem celebrates the indomitable human spirit’s ability to overcome adversity and discrimination.

Example 5.

George Orwell’s novel “1984” is a dystopian masterpiece that primarily addresses the theme of totalitarianism and the dangers of a surveillance state. The story is set in a bleak future where the government exercises total control over its citizens.

Q: What is the central theme explored in George Orwell’s “1984”?

- A) *Happiness and contentment*
- B) *Totalitarianism and surveillance*
- C) *Travel and adventure*
- D) *Fashion trends*

Answer: B) Totalitarianism and surveillance

Explanation: The provided information states that the central theme of George Orwell's novel "1984" primarily addresses totalitarianism and the dangers of a surveillance state. The story is set in a dystopian world where government control and surveillance are dominant themes.

Example 6.

In Shirley Jackson's short story "The Lottery," the central theme criticizes blind conformity within a small town's tradition of a deadly annual lottery. The chilling narrative highlights the dangers of unquestioningly following tradition.

Q: What is the primary theme criticized in "The Lottery"?

- A) Environmental conservation
- B) Blind conformity and tradition
- C) Financial planning
- D) Political activism

Answer: B) Blind conformity and tradition

Explanation: The paragraph indicates that the central theme criticized in Shirley Jackson's "The Lottery" is blind conformity within a town's tradition of a deadly annual lottery. The story highlights the dangers of unquestioningly following tradition.

Example 7.

Martin Luther King Jr.'s "I Have a Dream" speech is a historic address that centers on the theme of civil rights and racial equality. King passionately articulates his vision for a racially integrated and just America.

Q: What is the central theme of Martin Luther King Jr.'s "I Have a Dream" speech?

- A) Sports and athletics
- B) Civil rights and racial equality
- C) Culinary arts
- D) Modern technology

Answer: B) Civil rights and racial equality

Explanation: The provided information states that the central theme of Martin Luther King Jr.'s "I Have a Dream" speech is civil rights and racial equality. The speech passionately articulates King's vision for a racially integrated and just America.

Example 8.

F. Scott Fitzgerald's novel "The Great Gatsby" explores the theme of the American Dream and its corruption. Through the enigmatic character

of Jay Gatsby, the author delves into the pursuit of wealth and success.

Q: What is the central theme of "The Great Gatsby"?

- A) Space exploration
- B) The American Dream and its corruption
- C) World history
- D) Scientific inventions

Answer: B) The American Dream and its corruption

Explanation: The paragraph indicates that the central theme of F. Scott Fitzgerald's novel "The Great Gatsby" is the American Dream and its corruption. The story explores the pursuit of wealth and success, highlighting its corrupting influence.

Example 9.

In E.B. White's children's book "Charlotte's Web," the primary theme revolves around friendship and the circle of life. The story follows the bond between a spider named Charlotte and a pig named Wilbur.

Q: What is the central theme of "Charlotte's Web"?

- A) Adventure and exploration
- B) Friendship and the circle of life
- C) Advanced mathematics
- D) Social media trends

Answer: B) Friendship and the circle of life

Explanation: The provided information states that the primary theme of E.B. White's "Charlotte's Web" is friendship and the circle of life. The story centers around the bond between a spider named Charlotte and a pig named Wilbur.

Example 10.

Logical detection is a valuable skill that involves recognizing patterns, making connections, and identifying recurring ideas or messages within various forms of communication.

Q: What does logical detection primarily involve?

- A) Solving crossword puzzles
- B) Cooking gourmet meals
- C) Identifying patterns and recurring ideas
- D) Playing musical instruments

Answer: C) Identifying patterns and recurring ideas

Explanation: The paragraph explains that logical detection primarily involves recognizing patterns, making connections, and identifying recurring ideas or messages within various forms of communication. This makes option C the correct choice.

Direction (1-5): Answer the following questions based on the arrangement given below:

Q1. If the symbols followed by consonants interchange their positions within the group, then which element is third from the right end?

B @ C 7 N R % 5 \$ G 6 K M & 4 S # P U 5

- (a) U
- (b) #
- (c) P
- (d) 5
- (e) None of these

Answer: b

Explanation:-

Given series – B @ C 7 N R % 5 \$ G 6 K M & 4 S # P U 5

After operation – B C @ 7 N R % 5 G \$ 6 K M & 4 S P # U 5

So, third element from the right end = #

Q2. Based on the given arrangement which of the following groups should be next?

BC7 R5\$ 6M&?

- (a) N5G
- (b) KS#
- (c) SPU
- (d) C4H
- (e) 4SP

Answer: c

Explanation:-

Given series – B @ C 7 N R % 5 \$ G 6 K M & 4 S # P U 5

So, SPU is the correct answer.

Q3. Which of the following is second to the left of the twelfth from the right end if all the symbols are dropped?

- (a) F
- (b) C
- (c) 7

- (d) M
- (e) None of these

Answer: b

Explanation:-

Given series – B @ C 7 N R % 5 \$ G 6 K M & 4 S # P U 5

After dropping symbols – B C 7 N R 5 G 6 K M 4 S P U 5

So, 12th from the right end – N

Hence, second to the left of N is C.

Q4. If the numbers which are preceded by letters interchanged their positions and those letters were changed to the next letter in the alphabetical series, then which of the following elements are the fourth from the left end and the eleventh from the right end?

- (a) F and 7
- (b) 6 and D
- (c) A and \$
- (d) D and 6
- (e) None of these

Answer: d

Explanation:-

Given series – B @ C 7 N R % 5 \$ G 6 K M & 4 S # P U 5

After operation – B @ 7 C N R % 5 \$ 6 G K M & 4 S # P 5 U

After changing – B @ 7 D N R % 5 \$ 6 H K M & 4 S # P 5 V

So, fourth from the left end and eleventh from the right end – D and 6

Therefore, option d is the correct answer.

Q5. How many letters are there which are preceded by a symbol and followed by a number within the group in the given arrangement?

- (a) None
- (b) One
- (c) Two
- (d) Three
- (e) More than three

Answer: c

Explanation:-

Given series – B @ C 7 N R % 5 \$ G 6 K M & 4 S # P U 5

So, there are two letters (@C7, \$G6). Therefore option c is the correct answer.

Direction (6-10): Study the following digit-letter-symbol sequence carefully and answer the questions given below.

Q6. If all the digits are dropped, which of the following is third to the right of the eleventh from the right end?

* E 7 O & 6 ^ 4 Z 5 * 3 9 T ! D # 2 \$ U

- (a) ^
- (b) 8
- (c) Z
- (d) &
- (e) T

Answer: c

Explanation:-

Given Series – * E 7 O & 6 ^ 4 Z 5 * 3 9 T ! D # 2 \$ U

After dropping digits – * E O & ^ Z * T ! D # \$ U

So, eleventh from the right end – O

Therefore, third to the right of O – Z

Q7. What is the 7th element to the left of the element that is 9th from the right end?

- (a) &
- (b) C
- (c) 2
- (d) #
- (e) \$

Answer: a

Explanation:-

Given Series – * E 7 O & 6 ^ 4 Z 5 * 3 9 T ! D # 2 \$ U

9th from the right end – 3

So, the 7th element to the left of 3 – &

Hence, option a) is the correct answer.

Q8. How many digits are there which are preceded by a symbol and followed by a letter?

- (a) 0
- (b) 1
- (c) 2
- (d) 3
- (e) More than 3

Answer: b

Explanation:-

Given Series – * E 7 O & 6 ^ 4 Z 5 * 3 9 T ! D # 2 \$ U

So, there is one digit (4). Hence, option (b) is the correct answer.

Q9. If all the symbols are removed then what will be the element which is 9th from the left?

- (a) 4
- (b) 7
- (c) 1
- (d) 9
- (e) None of the above

Answer: d

Explanation:-

Given Series – * E 7 O & 6 ^ 4 Z 5 * 3 9 T ! D # 2 \$ U

After dropping symbols – E 7 O 6 4 Z 5 3 9 T D 2 U

So, 9th from the left end – 9

Hence, option (d) is the correct answer.

Q10. If all the digits are arranged in decreasing order from the left, how many digits will have their positions unchanged?

- (a) 0
- (b) 1
- (c) 2
- (d) 3
- (e) More than 3

Answer: c

Explanation:-

Given Series – * E 7 O & 6 ^ 4 Z 5 * 3 9 T ! D # 2 \$ U

After operation – * E 9 O & 7 ^ 6 Z 5 * 4 3 T ! D # 2 \$ U

So, 2 digits that is 5 and 2 has not changed.

Hence, option (c) is the correct answer.

Direction (11-15): Study the following digit-letter-symbol sequence carefully and answer the questions given below.

Y Z # 8 F H 7 \$ 3 M O & 9 7 G Q % K X @ 4 6 J I # D T S 8 \$

Q11. What should come in place of the question mark in the following series?

ZF# 7M\$ &G9 %@K ?

- (a) JDI
- (b) 4I6
- (c) 6IJ
- (d) 6#J
- (e) None of these

Answer: d

Explanation:-

Given series – Y Z#8FH7\$3MO&97

G Q % K X @ 4 6 J I # D T S 8 \$

Therefore, option (d) is the correct answer.

Q12. How many such numbers are there in the given series which are immediately preceded or followed by a consonant?

- (a) Three
- (b) Four
- (c) More than five
- (d) Five
- (e) None of these

Answer: c

Explanation:-

Given series – Y Z # 8 F H 7 \$ 3 M O & 9 7 G Q % K X @ 4 6 J I # D T S 8 \$

So, there are six such numbers which are immediately preceded or followed by a consonant. Hence, option (c) is the correct answer.

Q13. If all the symbols are dropped from the series then which element will be fifth to the right of the one which is fourteenth from the right end of the new arrangement?

- (a) G
- (b) K
- (c) 4
- (d) X
- (e) None of these

Answer: d

Explanation:-

Given series – Y Z # 8 F H 7 \$ 3 M O & 9 7 G Q % K X @ 4 6 J I # D T S 8 \$

After dropping symbols – Y Z 8 F H 7 3 M O 9 7 G Q K X 4 6 J I D T S 8

So, fourteenth from the right end – 9

Then, fifth to the right of 9 – X

Hence, option (d) is the correct answer.

Q14. Which of the following element is 17th to the right of the one which is 24th from the right end of the given arrangement?

- (a) I
- (b) J
- (c) #
- (d) T
- (e) None of these

Answer: a

Explanation:-

Given series – Y Z # 8 F H 7 \$ 3 M O & 9 7 G Q % K X @ 4 6 J I # D T S 8 \$

So, 24th from the right end – 7

Then, 17th to the right of 7 – I

Hence, option (a) is the correct answer.

Q15. How many such symbols are there in the given series which are immediately preceded by a consonant but not immediately followed by a consonant?

- (a) Four
- (b) One
- (c) Three
- (d) Two
- (e) None of these

Answer: a

Explanation:-

Given series – Y Z # 8 F H 7 \$ 3 M O & 9 7 G Q % K X @ 4 6 J I # D T S 8 \$

So, there are four symbols. Hence, option (a) is the correct answer.

Direction (16-20): Study the following digit-letter-symbol sequence carefully and answer the questions given below.

M Z 3 + T # & I H N % 8 \$ J Q 1 L M * @ X R 6 4 # D F +

Q16. How many such symbols are there in the above arrangement each of which is either immediately followed by a number or immediately preceded by a letter, but not both?

- (a) None
- (b) One
- (c) Two
- (d) Three
- (e) More than 3

Answer: d

Explanation:-

Given Series – M Z 3 + T # & I H N % 8 \$ J Q 1 L M * @ X R 6 4 # D F +

So, there are three symbols in the above arrangement. Hence, option (d) is the correct answer.

Q17. Four of the following five are alike in a certain way. Which one does not belong to the group?

- (a) 3 Z D F
- (b) # T 6 4
- (c) M T + 4
- (d) # I 6 X
- (e) + # 3 D

Answer: e

Explanation:-

Given Series – M Z 3 + T # & I H N % 8 \$ J Q 1
L M * @ X R 6 4 # D F +

In all other groups, the 3rd and 4th elements occupy the same positions from the right in the given arrangement as the first and 2nd elements respectively from the left end.

Hence, option (e) is the correct answer.

Q18. 3 Z T is to & H % in the same way as Q J L is to?

- (a) X R *
- (b) * X M
- (c) @ * R
- (d) @ X L
- (e) None of these

Answer: b

Explanation:-

Given Series – M Z 3 + T # & I H N % 8 \$ J Q 1
L M * @ X R 6 4 # D F +

In each pair, the 1st, 2nd and 3rd elements of the 1st term move 4, 7 and 1 step forward respectively to give the corresponding elements of the 2nd term.

Hence, option (b) is the correct answer.

Q19. How many such numbers are there each of which is either immediately followed by a symbol or immediately preceded by a letter, but not both?

- (a) None
- (b) One
- (c) Two
- (d) Three
- (e) More than three

Answer: e

Explanation:-

Given Series – M Z 3 + T # & I H N % 8 \$ J
Q 1 L M * @ X R 6 4 # D F +

Hence, there are four numbers. So, option (e) is the correct answer.

Q20. How many such letters are there, each of which is either immediately followed by a number or immediately preceded by a symbol but not both?

- (a) None
- (b) One
- (c) Two
- (d) Three
- (e) More than 3

Answer: e

Explanation:-

Given Series – M Z 3 + T # & I H N % 8 \$ J Q 1
L M * @ X R 6 4 # D F +

Hence, there are four letters which is either immediately followed by a number or immediately preceded by a symbol but not both. Therefore option (e) is the correct answer.

Directions (1-5): There is a certain relation between two given words on one side of: and one word is given on another side of: while another word is to be found from the given alternatives, having the same relation with this word as the given pair has.

Q1. Federal Reserve System: USA:: RBI:?

- 1. India
- 2. Pakistan
- 3. The United Kingdom
- 4. Brazil

Answer: 1

Solution: Federal Reserve System is the central bank of the USA. Similarly, RBI is the central bank of India. Hence, option 1 is the correct answer.

Q2. Joey : Kangaroo:: Calf:?

- 1. Dog
- 2. Cattle
- 3. Cat
- 4. Rhinoceros

Answer: 2

Solution: Young Kangaroo is called Joey. Similarly, a young one of Cattle is called Calf. Hence, option 2 is the correct answer.

Q3. Cork: Pop:: Coins : ?

- 1. Tinkle
- 2. Ring
- 3. Rattle
- 4. Zoom

Answer: 1

Solution: Pop is the sound made by Cork. Similarly, Tinkle is the sound made by coins. Hence, option 1 is the correct answer.

Q4. Octopus : Mollusca :: Earthworm : ?

- 1. Vertebrata
- 2. Arthropod

3. Platyhelminthes
4. Annelida

Answer: 4

Solution: Octopus belongs to the Mollusca family. Similarly, Earthworm belongs to Annelida. Hence, option 4 is the correct answer.

Q5. Goa : Panaji:: Gujarat: ?

1. Ahmedabad
2. Porbandar
3. Gandhinagar
4. Kandla

Answer: 3

Solution: Panaji is the capital of Goa. Similarly, Gandhinagar is the capital of Gujarat. Hence, option 3 is the correct answer.

Q6. Which of the following is the same as Nepal, Bhutan, Myanmar ?

1. Pakistan
2. Thailand
3. Malaysia
4. Indonesia

Answer: 1

Solution: Nepal, Bhutan, Myanmar & Pakistan are the countries that touch their boundaries with India. Hence, option 1 is the correct answer.

Q7. Which of the following is the same as Toyota, Honda, BMW ?

1. TVS
2. Bajaj
3. Hero
4. Mercedes

Answer: 4

Solution: Toyota, Honda, BMW, and Mercedes are four-wheel vehicle companies. Hence, option 4 is the correct answer.

Q8. Which of the following is the same as Chemistry, Physics, Biology ?

1. English
2. Science
3. Maths
4. Hindi

Answer: 2

Solution: Chemistry, Physics & Biology are part of Science. Hence, option 2 is the correct answer.

Q9. Which of the following is the same as New Delhi, Tokyo, Dhaka ?

1. Sri Lanka
2. Pakistan
3. Bhutan
4. Kathmandu

Answer: 4

Solution: New Delhi, Tokyo, Dhaka & Kathmandu are the capital of different countries. Hence, option 4 is the correct answer.

Q10. Which of the following is the same as LBW, Bowled, Caught?

1. Six
2. Four
3. Runout
4. No ball

Answer: 3

Solution: LBW, Bowled, Caught & Runout are different types of outs in cricket. Hence, option 3 is the correct answer.

Q11. Which of the following is the same as Australia, America, Antarctica?

1. India
2. Europe
3. Japan
4. New Zealand

Answer: 2

Solution: Australia, America, Antarctica, and Europe are Continents. Hence, option 2 is the correct answer.

Q12. 'Warning' is related to 'Danger' in the same way 'Mystery' is related to _____?

1. Clue
2. Risk
3. History
4. Direction

Answer: 1

Solution: Warning can help to prevent danger. Similarly, Clue can help to solve mysteries. Hence, option 1 is the correct answer.

Q13. 'Badminton' is related to 'Court' in the same way 'Cricket' is related to _____?

1. Ring
2. Arena
3. Pool
4. Stadium

Answer: 4

Solution: Badminton is played in court. Similarly, Cricket is played in Stadium. Hence, option 4 is the correct answer,

Q14. Language' is related to 'Semantics' in the same way as 'Skull' is related to

'_____'.

1. Mycology
2. Craniology
3. Conchology
4. Astrology

Answer: 2

Solution: As Semantics is the field of study of Language. Similarly, Craniology is the field of study of the Skull. Hence, option 2 is the correct answer.

Q15. Bromine is related to Halogen in the same way as Krypton is related to _____.

1. Inert Gas
2. Radioactive element
3. Metal
4. Gas

Answer: 1

Solution: Krypton belongs to the 18th group of the table. 18th group represents noble gas or inert gas. Hence, option 1 is the correct answer.

Q16. 'Taj Mahal is related to 'Agra' in the same way 'Victoria Memorial' is related to

'_____'.

1. Kolkata
2. Kerala
3. Mumbai
4. New Delhi

Answer: 1

Solution: Taj Mahal is situated in Agra city and Victoria Memorial is situated in Kolkata. Hence, option 1 is the correct answer.

Q17. 'Algebra' is related to 'Maths' in the same way as 'Optics' is related to _____'

1. Physics
2. Electronics
3. Geography
4. Biology

Answer: 1

Solution: As, Algebra is a chapter segment in Maths subject. Similarly, Optics is a chapter

segment in Physics subject. Hence, option 1 is the correct answer.

Q18. Select the option that is related to the third term in the same way as the second term is related to the first term.

Ichthyology : Fishes :: Pedology : ?

1. Shells
2. Names
3. Soil
4. Moon

Answer: 3

Solution: As ichthyology is the study of fishes. Similarly, pedology is the scientific study of soil. Hence, option 3 is the correct answer.

Q19. As the 'temperature' is related to 'Degree', in the same way, 'Time' is related to '_____'.

1. Meter
2. Liter
3. Second
4. Newton

Answer: 3

Solution: Relationship is- Quantity : its unit. As, a unit of temperature is a degree. Similarly, a unit of time is second. Hence, option 3 is the correct answer.

Q20. Select the option in which the words share the same relationship as that shared by the given pair of words.

Helmet : Head

1. Shirt: Hanger
2. Shoe: Shoe rack
3. Gloves: Hands
4. Water: Bottle

Answer: 3

Solution: Helmet is worn on the head. Similarly, gloves are worn on the hands. Hence, option 3 is the correct answer.

Statements and Conclusion Questions and Answers

Q1. Statements: A company has 100 employees. 60% of them are women.

Conclusions: I) The company has 40 male

employees.

II) Women are the majority in the company.

- a. Only conclusion I follows.
- b. Only conclusion II follows.
- c. Both I and II follows.

Answer: Both I and II follow.

Q2. Statements: A school has 500 students. 50% of them are boys.

Conclusions: I) The school has 250 girls.

II) Boys are the majority in the school.

- a. Only conclusion I follows.
- b. Only conclusion II follows.
- c. Both I and II follows.

Answer: Only conclusion I follow.

Q3. Statements: In a city, 80% of the population speaks English. The total population is 1 million.

Conclusions: I) The number of people who speak English is 800,000.

II) English is the only language spoken in the city.

- a. Only conclusion I follows.
- b. Only conclusion II follows.
- c. Both I and II follows.

Answer: Only conclusion I follows.

Q4. Statements: A store sold 500 units of a product. 70% of the units were sold on a sale.

Conclusions: I) The store sold 350 units on sale.

II) The store made a profit on all the units sold.

- a. Only conclusion I follows.
- b. Only conclusion II follows.
- c. Both I and II follows.

Answer: Only conclusion I follows.

Q5. Statements: A survey was conducted on 100 people. 70% of them prefer tea over coffee.

Conclusions: I) The number of people who prefer tea is 30.

II) Coffee is not a popular choice among the surveyed population.

- a. Only conclusion I follows.
- b. Only conclusion II follows.
- c. Both I and II follows.

Answer: Only conclusion II follows.

Q6. Statements: A library has 10,000 books. 40% of them are fiction.

Conclusions: I) The library has 4,000 non-fiction books.

II) The majority of books in the library are fiction.

- a. Only conclusion I follows.
- b. Only conclusion II follows.
- c. Both I and II follows.

Answer: Only conclusion II follows.

Q7. Statements: In a class of 30 students, 60% are girls.

Conclusions: I) There are 18 boys in the class.

II) Girls are the majority in the class.

- a. Only conclusion I follows.
- b. Only conclusion II follows.
- c. Both I and II follows.

Answer: Only II follows.

Q8. Statements: A restaurant served 100 customers. 80% of them ordered non-vegetarian dishes.

Conclusions: I) The restaurant served 20 vegetarian dishes.

II) Non-vegetarian dishes are more popular among the customers.

- a. Only conclusion I follows.
- b. Only conclusion II follows.
- c. Both I and II follows.

Answer: Both I and II follows.

Courses of action: Questions and Answers

Q1. Read the following statement and select the most appropriate assumption:

Statement: The constable has been recommended for suitable reward by his superior in recognition of his sincere duty and busting of several gangs of criminal activity involved in the loot and incidents of pick pocketing. Assumption 1 : The superior is certain that the recommendation would be denied

Assumption 2 : The number of criminals apprehended by this constable was exceptionally high

Assumption 3 : The constable desires to be monetarily compensated for his efforts

Assumption 4 : The superior wants to set an example for his other juniors by

recommending the reward Assumption 5 :

Rewards recognizing the sincerity and accomplishments of policemen are given

Solution:

Assumption 1 is incorrect as if he was certain that the recommendation would be denied, he would have never made it in the first place.

Assumption 2 is incorrect because the number of criminals apprehended is not mentioned anywhere.

Assumption 3 is incorrect because no such data about monetary reward is mentioned in the statement.

Assumption 4 is incorrect because no thought of setting the example is mentioned in the statement. The constable is being rewarded for his efforts and not for the want of the senior policeman.

Assumption 5 is the most appropriate option because it states that rewards are given. That is the reason why the senior policeman has recommended a suitable reward for the constable. Thus, option 5 is the correct choice.

Q2. For the given statement, which of the following courses of action are justified:

Statement: Private airlines have increased their fare by almost 50 % .

Course of Action 1 : People should be advised to travel only by buses and trains which have less fare

Course of Action 2 : Airfares should be regulated by the controlling authority

Solution :

Course of action 1 is not feasible because there may be people who have to reach urgently to some place. Travelling by bus/train takes more time than travelling by air.

Course of action 2 is justified as the airfares should not be increased over a certain limit and restrict the airline companies from exploiting the passengers.

Q3. Statement: The number of people using public transportation in the city has decreased drastically since the introduction of high parking fees in the downtown area.

Courses of Action:

I. The city should lower the parking fees to encourage the use of public transportation.

II. Public transportation fares should be

reduced to make them more attractive to people.

1. Only I follows
2. Only II follows
3. Either I or II follows
4. Neither I nor II follows
5. Both I and II follows

Answer: 5) Both I and II follows

Q4. Statement: Due to increasing pollution, the government has announced that it will ban the use of all single-use plastic products from next month

Courses of Action:

I. The government should introduce an awareness campaign to encourage people to use eco-friendly products.

II. The government should provide subsidies to companies that manufacture eco-friendly products.

1. Only I follows
2. Only II follows
3. Either I or II follows
4. Neither I nor II follows
5. Both I and II follow

Answer: 5) Both I and II follows

Q5. Statement: The construction of a new airport near a residential area has been causing noise pollution and disturbances to the local residents.

Courses of Action:

I. The residents should organize protests and demonstrations to demand that the construction be stopped.

II. The airport authorities should take measures to reduce noise pollution, such as using sound barriers and limiting flight times.

1. Only I follows
2. Only II follows
3. Either I or II follows
4. Neither I nor II follows
5. Both I and II follows

Answer: 5) Both I and II follows

Directions (1-5): There is a certain relation between two given words on one side of:: and one word is given on another side of:: while another word is to be found from the

given alternatives, having the same relation with this word as the given pair has.

Q1. Federal Reserve System: USA:: RBI:?

1. India
2. Pakistan
3. The United Kingdom
4. Brazil

Answer: 1

Solution: Federal Reserve System is the central bank of the USA. Similarly, RBI is the central bank of India. Hence, option 1 is the correct answer.

Q2. Joey : Kangaroo:: Calf:?

1. Dog
2. Cattle
3. Cat
4. Rhinoceros

Answer: 2

Solution: Young Kangaroo is called Joey. Similarly, a young one of Cattle is called Calf. Hence, option 2 is the correct answer.

Q3. Cork: Pop:: Coins : ?

1. Tinkle
2. Ring
3. Rattle
4. Zoom

Answer: 1

Solution: Pop is the sound made by Cork. Similarly, Tinkle is the sound made by coins. Hence, option 1 is the correct answer.

Q4. Octopus : Mollusca :: Earthworm : ?

1. Vertebrata
2. Arthropod
3. Platyhelminthes
4. Annelida

Answer: 4

Solution: Octopus belongs to the Mollusca family. Similarly, Earthworm belongs to Annelida. Hence, option 4 is the correct answer.

Q5. Goa : Panaji:: Gujarat: ?

1. Ahmedabad
2. Porbandar
3. Gandhinagar
4. Kandla

Answer: 3

Solution: Panaji is the capital of Goa. Similarly, Gandhinagar is the capital of Gujarat. Hence, option 3 is the correct answer.

Q6. Which of the following is the same as Nepal, Bhutan, Myanmar ?

1. Pakistan
2. Thailand
3. Malaysia
4. Indonesia

Answer: 1

Solution: Nepal, Bhutan, Myanmar & Pakistan are the countries that touch their boundaries with India. Hence, option 1 is the correct answer.

Q7. Which of the following is the same as Toyota, Honda, BMW ?

1. TVS
2. Bajaj
3. Hero
4. Mercedes

Answer: 4

Solution: Toyota, Honda, BMW, and Mercedes are four-wheel vehicle companies. Hence, option 4 is the correct answer.

Q8. Which of the following is the same as Chemistry, Physics, Biology ?

1. English
2. Science
3. Maths
4. Hindi

Answer: 2

Solution: Chemistry, Physics & Biology are part of Science. Hence, option 2 is the correct answer.

Q9. Which of the following is the same as New Delhi, Tokyo, Dhaka ?

1. Sri Lanka
2. Pakistan
3. Bhutan
4. Kathmandu

Answer: 4

Solution: New Delhi, Tokyo, Dhaka & Kathmandu are the capital of different countries. Hence, option 4 is the correct answer.

Q10. Which of the following is the same as LBW, Bowled, Caught?

1. Six
2. Four
3. Runout
4. No ball

Answer: 3

Solution: LBW, Bowled, Caught & Runout are different types of outs in cricket. Hence, option 3 is the correct answer.

Q11. Which of the following is the same as Australia, America, Antarctica?

1. India
2. Europe
3. Japan
4. New Zealand

Answer: 2

Solution: Australia, America, Antarctica, and Europe are Continents. Hence, option 2 is the correct answer.

Q12. 'Warning' is related to 'Danger' in the same way 'Mystery' is related to _____?

1. Clue
2. Risk
3. History
4. Direction

Answer: 1

Solution: Warning can help to prevent danger. Similarly, Clue can help to solve mysteries. Hence, option 1 is the correct answer.

Q13. 'Badminton' is related to 'Court' in the same way 'Cricket' is related to _____?

1. Ring
2. Arena
3. Pool
4. Stadium

Answer: 4

Solution: Badminton is played in court. Similarly, Cricket is played in Stadium. Hence, option 4 is the correct answer.

Q14. Language' is related to 'Semantics' in the same way as 'Skull' is related to _____.

1. Mycology
2. Craniology
3. Conchology
4. Astrology

Answer: 2

Solution: As Semantics is the field of study of Language. Similarly, Craniology is the field of study of the Skull. Hence, option 2 is the correct answer.

Q15. Bromine is related to Halogen in the same way as Krypton is related to _____.

1. Inert Gas
2. Radioactive element
3. Metal
4. Gas

Answer: 1

Solution: Krypton belongs to the 18th group of the table. 18th group represents noble gas or inert gas. Hence, option 1 is the correct answer.

Q16. 'Taj Mahal is related to 'Agra' in the same way 'Victoria Memorial' is related to _____.

1. Kolkata
2. Kerala
3. Mumbai
4. New Delhi

Answer: 1

Solution: Taj Mahal is situated in Agra city and Victoria Memorial is situated in Kolkata. Hence, option 1 is the correct answer.

Q17. 'Algebra' is related to 'Maths' in the same way as 'Optics' is related to _____.

1. Physics
2. Electronics
3. Geography
4. Biology

Answer: 1

Solution: As, Algebra is a chapter segment in Maths subject. Similarly, Optics is a chapter segment in Physics subject. Hence, option 1 is the correct answer.

Q18. Select the option that is related to the third term in the same way as the second term is related to the first term.

Ichthyology : Fishes :: Pedology : ?

1. Shells
2. Names
3. Soil
4. Moon

Answer: 3

Solution: As ichthyology is the study of fishes. Similarly, pedology is the scientific study of soil. Hence, option 3 is the correct answer.

Q19. As the 'temperature' is related to 'Degree', in the same way, 'Time' is related to '_____'.
 1. Meter
 2. Liter
 3. Second
 4. Newton

Answer: 3

Solution: Relationship is- Quantity : its unit. As, a unit of temperature is a degree. Similarly, a unit of time is second. Hence, option 3 is the correct answer.

Q20. Select the option in which the words share the same relationship as that shared by the given pair of words.

Helmet : Head

1. Shirt: Hanger
2. Shoe: Shoe rack
3. Gloves: Hands
4. Water: Bottle

Answer: 3

Solution: Helmet is worn on the head. Similarly, gloves are worn on the hands. Hence, option 3 is the correct answer.

Practice Questions on Decimal Fractions

Q1. What decimal of 10 is 2?

- A. 0.2
- B. 0.02
- C. 0.002
- D. 0.0002

Answer:

One can solve this as $2/10 = 0.2$. Hence option A.

Q2. What is the value of $(0.1 \times 0.1 \times 0.1)$?

- A. 0.1
- B. 0.01
- C. 0.001
- D. 0.0001

Answer:

One can solve this as $0.1 \times 0.1 \times 0.1 = 0.001$. Hence option C.

Q3. What is the value of 3412.55×1000 ?

- A. 34.1255
- B. 3.41255
- C. 341.255
- D. 3412550

Answer:

One can solve this as $3412.55 \times 1000 = 3412550$.

Hence option D.

Q4. What is the value of $3412.55/1000$?

- A. 34.1255
- B. 3.41255
- C. 341.255
- D. 3412550

Answer:

One can solve this as $3412.55/1000 = 3.41255$. Hence option B.

Q5. What is the value of $(10 \times 10 \times 10) / (100 \times 100)$?

- A. 0.1
- B. 0.01
- C. 0.001
- D. 1

Answer:

One can solve this as $(10 \times 10 \times 10) / (100 \times 100)$

$$1000/10000 = 0.1$$

Hence option A.

Q6. What is the value of $(0.67 \times 0.67 + 0.33 \times 0.33 + 2 \times 0.67 \times 0.33)$

- A. 1
- B. 2
- C. 3
- D. 4

Answer:

One can solve this as, $(0.67 \times 0.67 + 0.33 \times 0.33 + 2 \times 0.67 \times 0.33)$

$$= (0.67)^2 + (0.33)^2 + 2 \times 0.67 \times 0.33$$

$$= (0.67 + 0.33)^2$$

$$= 1$$

Hence option A.

Q7. What is the $4114 + 11.44 - 41.14 = ?$

- A. 4084.3
- B. 408.43
- C. 40.843
- D. 40843

Answer:

One can solve this as $4114 + 11.44 - 41.14 = 4125.44 - 41.14$

= 4084.3

Hence option A.

Q8. What is the value of $0.97 \times 0.61 \times 0.6 = ?$

A. 0.35502

B. 3.5502

C. 35.502

D. 355.02

Answer:

One can solve this as $0.97 \times 0.61 \times 0.6$

= 0.5917×0.6

= 0.35502

Hence option A.

Q9. What is the value of $1.2/1.1 = x/22$

A. 24

B. 2.4

C. .24

D. 240

Answer:

One can solve this as $1.2/1.1 = x/22$

$1.2 \times 22 = 1.1 \times x$

$26.4 = 1.1 \times x$

$x = 26.4 / 1.1$

$x = 24$

Hence option A.

Q10. What is the value of $1.44/1.2 = x/2.4$

A. 2.88

B. 28.8

C. 288

D. .288

Answer:

One can solve this as $1.44/1.2 = x/2.4$

$1.44 \times 2.4 = 1.2 \times x$

$3.456 = 1.2 \times x$

$x = 3.456/1.2$

$x = 2.88$

Hence option A.

1. Question

Five years ago the ratio of the ages of Amit and Neha was 8 : 7. Three years hence, the ratio of their ages will be 12 : 11. what is Neha's age at present?

A) 13 years

B) 16 years

C) 8 years

D) 19 years

E) None of these

Answer:- D

Explanation:-

Let the age of Amit and Neha five years ago be $8x$ and $7x$ respectively.

Amit's present age = $(8x + 5)$

Neha's present age = $(7x + 5)$

Now, as per the equation,

$\frac{\{(8x + 5) + 3\}}{\{(7x + 5) + 3\}}$

= $12/11$

$\Rightarrow (8x + 8)/(7x + 8) = 12/11$

$\Rightarrow 88x + 88 = 84x + 96$

$\Rightarrow 4x = 8$

$\Rightarrow x = 2.$

\therefore Neha's present age = $(7x + 5) = (7 \times 2 + 5)$
= 19 years.

Hence, option D is correct.

Tricks:-

Amit : Neha = 8 : 7 (-5)

= 12 : 11 (+3)

= $(-5 + 3) = 2$

So, Neha's age = $7 \times 2 = 14$

Neha's present age = $14 + 5 = 19$ years

Or, Neha's age = $11 \times 2 = 22$

Neha's present age = $22 - 3 = 19$ years

2. Question

The present ages of the three friends are in the ratio 3 : 5 : 7. Eight years ago, the sum of their ages was 96. find the sum of the present ages of the first two friends (in years)?

A) 42 years

B) 64 years

C) 70 years

D) 67 years

E) None of these

Answer:- B

Explanation:-

Let the present age of three friend's are = $3x$, $5x$ and $7x$

$$(3x - 8) + (5x - 8) + (7x - 8) = 96$$

$$15x - 24 = 96$$

$$15x = 120$$

$$x = 8$$

Their present ages are 24 years, 40 years and 56 years respectively.

The sum of the present ages of the first two friends = $(24 + 40) = 64$ years

Hence, option B is correct.

3. Question

The ratio of the father's age to his son-in-law's age is $9 : 5$. The product of their ages is 1125. The ratio of their ages after five years will be :

A) $1 : 3$

B) $2 : 3$

C) $3 : 4$

D) $5 : 3$

E) None of these

Answer – D

Explanation:-

Let the present ages of Father and son-in-law be $9x$ and $5x$ respectively.

$$9x \times 5x = 1125$$

$$45x^2 = 1125$$

$$x^2 = 25$$

$$x = 5.$$

$$\text{Required ratio} = (9x + 5) : (5x + 5) \Rightarrow 50 : 30 \Rightarrow 5 : 3.$$

Hence, option D is correct.

4. Question

The total ages of Aman, Nageshwar and Satyam is 96 years. The ratio of their ages before 5 years was $2 : 3 : 4$. What is the present age of Aman?

A) 23 years

B) 32 years

C) 21 years

D) 33 years

E) None of these

Answer:- A

Explanation:-

Let the ages of Aman, Nageshwar and Satyam 5 years ago be $2x$, $3x$ and $4x$ years respectively.

So, total of their present ages will be,

$$(2x + 5) + (3x + 5) + (4x + 5) = 96$$

$$\Rightarrow 9x + 15 = 96$$

$$\Rightarrow 9x = 81$$

$$x = 9.$$

So, the present age of Aman = $(2x + 5) = (2 \times 9 + 5) = 23$ years.

Hence, option A is correct.

5. Question

The ratio of the present ages of two boys is $2 : 3$ and six years back, the ratio was $1 : 3$. What will be the ratio of their ages after 4 years ?

A) $1 : 3$

B) $3 : 4$

C) $2 : 3$

D) $3 : 5$

E) None of these

Answer :- B

Explanation:-

Assume $2x$ and $3x$ be the present age of two friends respectively.

Then,

$$2x - 6 = 1 \quad 3x - 63$$

$$\Rightarrow 6x - 18 = 3x - 6$$

$$\Rightarrow 3x = 12$$

$$\Rightarrow x = 4.$$

So, required ratio = $(2x + 4) : (3x + 4) \Rightarrow 12 : 16 \Rightarrow 3 : 4.$

Hence, option B is correct.

Tricks :-

$$2 : 3 \quad \text{---} \quad (\times 2) = 4 : 6 \quad (\times 2) = 8 : 12$$

$$1 : 3 \quad \text{---} \quad (\times 1) = 1 : 3 \quad (\times 2) = 2 : 6$$

So, the present ages of the two boys 8 years and 12 years respectively.

4 years later their ages will be $(8+4) = 12$ years and $(12+4) = 16$ years.

$$\text{Ratio} = 12 : 16 = 3 : 4.$$

6. Question

mother's age is twice of her daughter. Before ten years, she was twelve times as old as her daughter. What is the sum of the present age of a mother and her daughter together?

- A) 33 years
- B) 36 years
- C) 40 years
- D) 26 years
- E) None of these

Answer:- A

Explanation:-

Let, the present age of daughter = p
Present age of her mother = 2p

10 yr back, the ratio of their ages was = 12: 1

So,

$$(2p - 10)/(p - 10) = 12 / 1$$

$$\Rightarrow 2p - 10 = 12p - 120$$

$$\Rightarrow 10p = 110$$

$$\Rightarrow P = 110/10 = 11$$

Present age of daughter = 11 years

Present age of mother = $11 \times 2 = 22$ years

Thus, the sum of the present age of mother and her daughter

$$= 22+11 \text{ yrs}$$

$$= 33 \text{ years}$$

Here , A is the correct answer.

Tricks :-

$$\text{Mother : Daughter} = 2 : 1 \quad (\times 11) = 22 : 11$$

$$= 12 : 1 \quad (\times 1) = 12 : 1$$

Present age of Mother = 22 years

Present age of Daughter = 11 years

Thus, Sum of their ages = $22 + 11 = 33$ years.

7. Question

Amit is 2 years older than Bikash who is twice as old as Chetan. If the sum of the present ages of Amit, Bikash and Chetan be 52, then how old is Bikash?

- A) 20 years
- B) 22 ears
- C) 15 years
- D) 13 years
- E) 21 years

Answer: A

Explanation :-

Let the present age of Chetan = x years

So, Bikash's present age = 2x

And Amit's present age = 2x + 2

According to the question,

$$x+2x+2+2x = 52$$

$$\Rightarrow 5x+2 = 52$$

$$\Rightarrow 5x=50$$

$$\Rightarrow x=10$$

So, Bikash's age = $2 \times 10 = 20$ years

Here ,the correct option is A .

8. Question

In a family, of five-person, the total age of the elder brother and younger brother is 56 years and after four years the age of the elder brother will be three times that of the younger brother.

What is the age of the two brothers respectively?

- A) 12 years, 41 years
- B) 15 years, 53 years
- C) 11 years, 34 years
- D) 12 years, 44 years
- E) 21 years, 42 years

Answer: D

Solution:

Let the present age of the elder brother = x years
The present age of the younger brother = y years

According to the question,
 $x+y = 56$ —————(1)

After 4 years, age of the elder brother = $x+4$

after 4 years the age of younger brother = $y+4$

So,

$$x+4 = 3(y+4) \text{ —————(2)}$$

$$x+4 = 3y + 12$$

From the equation (1) we get,
 $x = 56-y$

Now putting the value of x in equation 2, we get

$$(56-y) + 4 = 3y + 12$$

$$\Rightarrow 60 - y = 3y + 12$$

$$\Rightarrow y = 12$$

So, the younger brother's present age is = 12 years

the elder brother's present age = $56-12 = 44$ years

Here the correct answer is D.

9. Question

Akash is as much elder than Vijay as he is younger to Ketan and the sum of the ages of Vijay and Ketan is 48 yr, then find the age of Akash.

- A) 36 years
- B) 24 years
- C) 27 years
- D) 18 years
- E) 22 years

Answer:- B

Explanation:-

Let the present age of Akash = x years
and he is younger to Ketan by y years

Then, Ketan's age = $(x + y)$ years

Vijay's age = $(x - y)$ years

Now, according to the question,

Sum of ages of Ketan and Vijay = 48

$$(x + y) + (x - y) = 48$$

$$2x = 48 \text{ years}$$

$$x = 24 \text{ years}$$

Hence, present age of Akash is 24 yr.

10. Question

Your uncle is three times as old as you. 15 yr hence, your uncle will be twice as old as you. What is the sum of the present ages of you and your uncle?

- A) 60 years
- B) 55 years
- C) 75 years
- D) 50 years
- E) none of these

Answer :- A

Explanation :-

Let, the present ages of your uncle and you be $3x$ and x years respectively

15 years later, ratio between your uncle and your age = 2 : 1

Now,

$$(3x + 15)/(x + 15) = 2/1$$

$$\Rightarrow 3x + 15 = 2x + 30$$

$$\Rightarrow x = 15$$

Thus, Sum of the ages of your uncle and your = $(3x + x)$

$$= 4 \times 15 = 60 \text{ years}$$

Here the correct answer is A .

11. Question

The present age of Kamal is 5 times the age of Shiva. After 10 yr, Kamal will be 3 times as old as Shiva. What are the present ages of Kamal and Shiva?

- A) 45 years, 9 years
- B) 55 years, 11 years
- C) 65 years, 13 years
- D) 40 years, 8 years
- E) 50 years, 10 years

Answer :- E

Explanation:-

Let the present age of Shivam = x years

Then, present age of Kamal = $5x$ years

After 10 years,

the ratio of ages of Kamal and Shiva = 3 : 1

According to the question,

$$(5x + 10)/(x + 10) = 3/1$$

$$\Rightarrow 5x + 10 = 3x + 30$$

$$\Rightarrow 2x = 20$$

$$\Rightarrow x = 10$$

Present age of Shiva = 10 years
Present age of Kamal = $10 \times 5 = 50$ years

12. Question

5 yr ago, the age of Sanjay was 4 times the age of Vikram and after 10 yr, Sanjay will be twice as old as Vikram. Find the present ages of Sanjay and Vikram.

- A) 35 years, 12.5 years
- B) 33 years, 11 years
- C) 45 years, 16 years
- D) 50 years, 18.5 years
- E) None of these

Answer:-A

Explanation:-

Let the present ages of Sanjay and Vikram be x years and y years, respectively.

According to the question,
5 years ago,

$$(x - 5)/(y - 5) = 4/1$$

$$\Rightarrow x - 5 = 4y - 20$$

$$\Rightarrow x = 4y - 15 \quad \text{—————(1)}$$

10 years later,

$$(x + 10)/(y + 10) = 2 : 1$$

$$\Rightarrow x + 10 = 2y + 20$$

$$\Rightarrow x = 2y + 10 \quad \text{—————(2)}$$

Equating both the equations (1) and (2), we get,

$$4y - 15 = 2y + 10$$

$$\Rightarrow 2y = 25$$

$$\Rightarrow y = 12.5$$

Putting the value of y in equation (2), we get,

$$x = 2 \times 12.5 + 10$$

$$\Rightarrow x = 35$$

Thus, the present age of Sanjay = 35 years
And the present age of Vikram = 12.5 years

13. Question

Four years ago, Sharma's age was $3/4$ times that of Raman. Four years hence, Sharma's age

will be $5/6$ times that of Raman. What is the present age of Sharma?

- (a) 16 yrs
- (b) 20 yr
- (c) 15 yr
- (d) 24 yr
- (e) 8 yr

Answer :-A

Explanation :-

4 years ago,
let, Raman's age = x years
And Sharma's age = $3x/4$ years

Now, Present age of Raman = $x + 4$ years
And present age of Sharma = $(3x/4 + 4)$ years

According to the question,

$$5/6 (x + 4 + 4) = (3x/4 + 4 + 4)$$

$$\Rightarrow 5/6 (x + 8) = (3x/4 + 8)$$

$$\Rightarrow 4(5x + 40) = 6(3x + 32)$$

$$\Rightarrow 20x + 160 = 18x + 192$$

$$\Rightarrow 2x = 32$$

$$\Rightarrow x = 16$$

Thus the present age of Sharma
= $(3/4 \times 16 + 4)$ years
= 16 years

Here the correct answer is A.

14. Question

The present ages of the two women are 36 and 50 yr, respectively. After p years, the ratio of their ages will be $3 : 4$, then find the value of p .

- (a) 3
- (b) 4
- (c) 6
- (d) 8
- (e) none of these

Answer :-C

Explanation :-

According to the question,
 $(36 + p)/(50 + p) = 3/4$
 $\Rightarrow 144 + 4p = 150 + 3p$
 $\Rightarrow p = 6$
Thus, the value of $p = 6$.

15. Question

The present ages of Rohit and Urvashi are 36 and 48 yr, respectively. What was the ratio between the ages of Urvashi and Rohit respectively 8 yr ago?

- (a) 7:4
- (b) 4:7
- (c) 11:8
- (d) 10 : 7
- (e) None of the above

Answer :- D

Explanation :-

$$\begin{aligned}\text{Ratio} &= (48 - 8) : (36 - 8) \\ &= 40 : 28 \\ &= 10 : 7\end{aligned}$$

Here the correct answer is D.

16. Question

The average age of two teachers is 35 yr. The average age of the two teachers and a student is 27 yr. What is the age of the student?

- (b) 11 yr
- (d) 10 yr
- (a) 12 yr
- (c) 10.5 yr

Answer :- A

Explanation :-

$$\begin{aligned}\text{Total age of two teachers} \\ &= 35 \times 2 = 70 \text{ yr}\end{aligned}$$

and total age of two teachers and students together

$$= 27 \times 3 = 81 \text{ yr}$$

$$\text{: Age of the student} = 81 - 70 = 11 \text{ yr}$$

17. Question

The average of the present ages of Saikat and Shivani is 36 yr. If Saikat is 8 yr older than Shivani, what is the Shivani's present age?

- (a) 30 yr
- (b) 34 yr
- (c) 32 yr

- (d) 40 yr
- (e) None of the above

Answer :- C

Explanation :-

Total age of Saikat and Shivani

$$= 36 \times 2 = 72 \text{ yr}$$

Let age of Shivani = x yr

Then, age of Saikat = (x + 8) yr

According to the question,

$$x + x + 8 = 72$$

$$2x = 64$$

$$x = 32$$

Hence, Shivani's present age = 32 years

18. Question

The ratio between the present ages of Irfaan and Kapil is 3 : 8. After 8 years, Irfaan's age will be 20 yr. What was Kapil's age 5 years hence?

- (a) 37 yr
- (b) 27 yr
- (c) 28 yr
- (d) 38 yr

Answer :-A

Explanation:-

Let present ages of Irfaan and Kapil are 3x years and 8x years respectively.

$$3x + 8 = 20$$

$$\Rightarrow 3x = 12$$

$$x = 4$$

Kapil's present age = 8x = 8 × 4 = 32 years

Hence, Kapil's age 5 years hence = 32 + 5 = 37 years

19. Question

The ratio between the present ages of Tanmay and Vivek is 3:7, respectively. After 4 yr, Vivek's

age will be 39 yr. What was Tanmay's age 4 yr later?

- (a) 11 yr
- (b) 13 yr
- (c) 19 yr
- (d) 18 yr
- (e) None of the above

Answer :- C

Explanation :-

Let Tanmay and Vivek's ages are $3x$ yr and $7x$ yr, respectively.

$$7x + 4 = 39 \Rightarrow x = 5$$

$$= 3 \times 5 - 4 = 11 \text{ yr}$$

Hence, Tanmay's age 4 yr later

$$= 3 \times 5 + 4$$

$$= 19 \text{ years.}$$

20. Question

The average age of a group of five girls is 24. If the present age of the youngest girl is 8 year, what was the average age of the group at the time of the birth of the youngest girl?

- (b) 16 yr
- (d) 18 yr
- (a) 22 yr
- (c) 12 yr
- (e) 20 yr

Answer:- E

Explanation:-

Total age of the group of five girls

$$= 24 \times 5 = 120$$

Total age of four girls at the time of

birth of youngest girl = $(120 - 8 \times 5)$ years

$$= 120 - 40 = 80 \text{ years}$$

Hence, required average age = $80/4 = 20$ yr

Hence the correct answer is E.

21. Question

30. The present age of Rahul's mother is four

times Rahul's present age. Five years ago, Rahul's mother was seven times as old as Rahul. What is the present age of Rahul's mother?

- (a) 84 yr
- (b) 70 yr
- (c) 40 yr
- (d) 35 yr

Answer:- C

Explanation:-

Let the present age of Rahul = x .

Then, present age of Rahul's mother = $4x$

Now, 5 yr ago,

Rahul's mother's age = $7 \times$ Rahul's age

$$4x - 5 = 7(x - 5)$$

$$\Rightarrow 4x - 5 = 7x - 35$$

$$\Rightarrow 3x = 30$$

$$\Rightarrow x = 10$$

.. Rahul's present age = $x = 10$ years

.. Rahul's mother's present age = $4x = 4 \times 10 = 40$ yr

22. Question

The age of Prakash is three times Arvind's age. After 7 yr, Prakash will be twice Arvind's age, then how many times will Prakash's age be in another 14 yr time with respect to Arvind's age then?

- (a) 3
- (b) 1
- (c) 1.5
- (d) 2
- (e) None of the above

Answer :-B

Explanation:-

Let Arvind's age = x yr

Then, Prakash's age = $3x$ yr

According to the question,

$$3x + 7 = 2(x + 7)$$

$$3x + 7 = 2x + 14$$

$$X = 7$$

$$\therefore \text{Age of Arvind after 14 yr} = 7 + 14 = 21 \text{ yr}$$

$$\text{Prakash's present age} = 21 \text{ yr}$$

Hence,

Prakash's age is one time of Arvind's age.

23. Question

10 years ago, the ratio of ages of a man and a woman was 13:17. After 17 years from now, the ratio of their ages will be 10:11. What is the present age of the woman?

- (a) 23 yr
- (b) 40 yr
- (c) 27 yr
- (d) 44 yr
- (e) None of the above

Answer:-C

Explanation:-

Let the ages of man and woman 10 yr before were $13x$ yr and $17x$ yr, respectively.

$$\text{Then, present age of man} = 13x + 10$$

$$\text{and present age of woman} = 17x + 10$$

According to the question,

$$(13x + 10 + 17)/(17x + 10 + 17) = 10/11$$

$$\Rightarrow (13x + 27)/(17x + 27) = 10/11$$

$$\Rightarrow 143x + 297 = 170x + 270$$

$$\Rightarrow 27x = 27$$

$$\Rightarrow x = 1$$

$$\text{Hence, the present age of the woman} \\ = (17 \times 1 + 10) = 27 \text{ years}$$

24. Question

Kailash age is twice of *Shekher's* age. 8 yr hence, the respective ratio between Kailash's

and *Shekhar's* ages will be 22:13. What is Kailash's present age?

- (b) 18 yr
- (d) 30 yr
- (a) 26 yr
- (c) 42 yr
- (e) None of the above

Answer:- E

Explanation:-

Let *Shekhar's* present age = x yr

Then, Kailash's present age = $2x$ yr

According to the question,

$$(2x + 8)/(x + 8) = 22/13$$

$$26x + 104 = 22x + 176$$

$$4x = 72$$

$$x = 18$$

$$\text{Hence, Kailash's age} = 2 \times 18 = 36 \text{ yr}$$

25. Question

Before 7 years, the ages of P and Q were in the ratio 4:5 and 7 yr hence, they will be in the ratio 5: 6. Find the age of Q in present.

- (a) 56 yr
- (b) 63 yr
- (c) 70 yr
- (d) 77 yr
- (e) none of these

Answer:- D

Explanation:-

Let, 7 yr ago, ages of P and Q were $4x$ years and $5x$ years, respectively.

$$\text{Then, present age of P} = 4x + 7$$

$$\text{and present age of Q} = 5x + 7$$

Now, according to the question,

$$(4x + 7 + 7)/(5x + 7 + 7) = 5/6$$

$$24x + 84 = 25x + 70$$

$$x = 14$$

$$\text{Hence, Q's present age} = (5x + 7)$$

$$= 5 \times 14 + 7 \text{ years}$$

$$= 77 \text{ years.}$$

Hence the correct answer is D.

Q.1 Sathish bought a second-hand bike and spent Rs.3000 on its repair and spare parts. Then he sold it to Rajesh at a profit of 15 % and then Rajesh sold it to Suresh at a loss of 10 %. Suresh finally sold it for Rs.22770 at a profit of 10%. How much amount did Sathish initially pay for the bike?

- A.Rs. 21000
- B.Rs. 17000
- C.Rs. 23000
- D.Rs. 19000
- E. None of these

Answer: B

Let Sathish pay for the bike be Rs. x,
 $(x + 3000) \times (115/100) \times (90/100) \times (110/100) = 22770$

$$(x + 3000) = \frac{22770 \times 100 \times 100 \times 100}{115 \times 90 \times 110}$$

$$(x + 3000) = 20000$$

$$x = 17000$$

The initial amount paid by Sathish = Rs. 17000

Q.2 A shopkeeper marks the price of the article as is 20% above its cost price and also offers a 10% discount. Find the profit percentage?

- A.10%
- B. 8%
- C.12%
- D.14%
- E. None of these

Answer: B

$$CP = x$$

$$SP = x * 120/100 * 90/100$$

$$= 1.08x$$

$$Profit = 1.08x - x$$

$$= 0.08x$$

$$Profit\ percentage = 0.08x/x * 100$$

$$= 8\%$$

Q.3 The shopkeeper sold article A at a 20% loss and the cost price of article A is Rs.4500. With that amount, he bought article

B and sold it at a profit of 30%. What is the overall profit or loss in the whole transaction?

- A. Rs.120
- B. Rs.150
- C. Rs.180
- D. Rs.200
- E. None of these

Answer: C

$$CP\ of\ article\ A = Rs.\ 4500$$

$$SP\ of\ article\ A = 80/100 * 4500 = Rs.3600$$

$$CP\ of\ article\ B = Rs.\ 3600$$

$$SP\ of\ article\ B = 3600 * 130/100 = Rs.4680$$

$$Total\ CP = 4500 + 3600 = Rs.8100$$

$$Total\ SP = 3600 + 4680 = Rs.\ 8280$$

$$Profit = 8280 - 8100 = Rs.180$$

Q.4 A shopkeeper offers two successive discounts of 20% and 15% respectively for the laptop while he gets 20% profit. If the selling price of the laptop is Rs.34000, what is the discount amount?

- A.Rs.12000
- B.Rs.14000
- C.Rs.16000
- D.Rs.18000
- E. None of these

Answer: C

$$SP = 34000$$

$$MP * 80/100 * 85/100 = 34000$$

$$MP = 50000$$

$$Discount = 50000 - 34000 = 16000$$

Q.5 A shopkeeper bought two articles A and B such that he had a Profit of 15% and 20% on selling articles A and B respectively. The selling price of articles A and B is Rs.230 and Rs.420 respectively. At what price must that items be sold together in order to gain 30%?

- A. Rs.686
- B. Rs.695
- C. Rs.700
- D. Rs.740
- E. None of these

Answer: E

$$SP\ of\ A = 230$$

$$Profit\% \ on\ A = 15\%$$

$$\text{CP of A} = 230 \times 100/115 = 200$$

$$\text{SP of B} = 420$$

$$\text{Profit\% on B} = 20\%$$

$$\text{CP of B} = 420 \times 100/120 = 350$$

$$\text{Total CP} = 200 + 350 = 550$$

Now, to earn a total profit of 30% on both item together, selling price = 130% of 550 = Rs.715

Q.6 What is the value of y , if an article is sold after allowing two successive discounts of $y\%$ and 5% and per cent profit earned after selling the article is $y\%$. The cost price and Marked price of the article are Rs.2850 and Rs.5000 Respectively.

A.15

B.20

C.25

D.30

E.35

Answer: C

$$\text{CP} = 2850 \quad \text{MP} = 5000$$

$$\text{Profit} = y\% \text{ Successive}$$

$$\text{discounts} = y\%, 5\%$$

$$((100 - y)/100) \times ((100 - 5)/100) \times 5000$$

$$= ((100+y)/100) \times 2850 [(100 - y)/100] \times 95/100 \times 5000$$

$$= (100 + y)/100 \times 2850$$

$$(100 - y) = (100+y) \times 3/5$$

$$500 - 5y = 300 + 3y$$

$$8y = 200$$

$$y = 25$$

Q.7 The shopkeeper marked 20% above the cost price of the article and also he gives 15% of the discount to his favourite customer. The customer sold that article to his friend in the amount of Rs.5896. If the cost price of the article is Rs.4800, then what is the profit gained by the customer?

A.Rs.800

B.Rs.2000

C.Rs.1000

D.Rs.1500

E. Cannot be determine

Answer: C

$$\text{MP of the article} = 4800 \times 120/100 = \text{Rs.}5760$$

$$\text{SP of the article} = 5760 \times 85/100 = \text{Rs.}4896$$

$$\text{CP of article for Customer} = \text{Rs.}4896$$

$$\text{SP of the customer} = \text{Rs.}5896 \quad \text{Profit} = 5896 - 4896 = 1000$$

Q.8 By selling a laptop for Rs.12000, a shopkeeper gains 20%. If the profit is reduced to 15%, then find the selling price of the laptop?

A.Rs.11500

B.Rs.13480

C.Rs.14560

D.Rs.23490

E. None of these

Answer: A

$$\text{CP} = \text{SP} \times 100/(100 + \text{P}\%)$$

$$= 12000 \times 100/(100 + 20)$$

$$= \text{Rs.}10000$$

$$\text{SP of laptop for 15\% profit} = \text{CP} \times (100 + \text{P}\%)/100$$

$$= 10000 \times (100 + 15)/100$$

$$= \text{Rs.}11500$$

Q.9 Praveen is a computer shop owner. He purchases the components of a desktop for Rs. 6200 and then he spends a further Rs. 2400 on labour charge to assemble the desktop. If he sells 18 desktops for Rs. 175000, then what is the approximate profit percentage?

A.13%

B.11.5%

C.12.2%

D.14.35%

E. 8.9%

Answer: A

$$\text{Total cost of one desktop}$$

$$= \text{Rs.} (6200 + 2400)$$

$$= \text{Rs.}8600$$

$$\text{Selling price of one desktop}$$

$$= \text{Rs.} (175000/18)$$

$$= \text{Rs.}9722.2$$

$$\text{Profit\%} = [(9722.2 - 8600)/8600] \times 100$$

$$= 13\%$$

$$(\text{Approx})$$

Q.10 A man sold an article for Rs.7600 and incurred a loss. Had he sold the article for Rs.8350, his gain would have been equal to half of the amount of loss that he incurred. At what price should he sell the article to have a 20% profit?

- A. Rs.8560
- B. Rs.7680
- C. Rs.11240
- D. Rs.9720
- E. None of these

Answer: D

$$\text{Loss} = \text{C.P} - 7600$$

$$\text{Profit} = 8350 - \text{CP}$$

$$\text{Profit} = (1/2) \times \text{Loss} \quad 8350 - \text{C.P}$$

$$= (1/2) [\text{C.P} - 7600] \quad 16700 - 2\text{C.P}$$

$$= \text{C.P} - 7600 \quad 3\text{C.P}$$

$$= 16700 + 7600$$

$$3\text{C.P} = 24300$$

$$\text{C.P} = \text{Rs.}8100$$

$$\text{Selling price} = 8100 \times (120/100)$$

$$= \text{Rs.}9720$$

Q.11 The selling price of 8 articles is equal to the cost price of 10 articles. What is the percentage profit in selling the articles?

- A. 15%
- B. 12%
- C. 20%
- D. 25%
- E. 28%

Answer: D

$$\text{S.P of 8 articles} = \text{C.P of 10 articles}$$

$$\text{S.P of 1 article} = \text{C.P of } (5/4) \text{ article}$$

$$\text{Let C.P of 1 article be Rs.}4$$

$$\text{S.P of 1 article} = (5/4) \times 4 = \text{Rs.}5$$

$$\text{So, percentage profit} = ((5 - 4)/4) \times 100\% = 25\%$$

Q.12 The cost price of a water bottle is Rs.50. If the marked price is 20% above its cost price and the discount is 5%, find the total discount on selling 19 bottles.

- A. Rs.3
- B. Rs.60
- C. Rs.57
- D. Rs.51
- E. Rs.253

Answer: C

$$\text{CP} = 50$$

$$\text{MP} = 50 \times 120/100 = 60$$

$$\text{Discount} = 60 \times 5/100 = 3$$

$$\text{Total discount} = 3 \times 19 = 57$$

Q.13 Ratio of the cost price to the marked price of the article is 4: 5. A shopkeeper offers a discount of 15% and the marked price of the article is Rs.720. What is the profit percentage of the article?

- A. 6.25%
- B. 4.75%
- C. 5.5%
- D. 3.40%
- E. None of these

Answer: A

$$\text{CP} = 4/5 \times 720 = \text{Rs.}576$$

$$\text{SP} = 720 \times 85/100 = \text{Rs.}612$$

$$\text{Profit percentage} = (612 - 576)/576 \times 100 = 6.25\%$$

Q.14 A fruit seller sold fruit at a loss of 5%. Had he sold it for Rs.20 more, he would have earned a profit of 5%. Find the cost of the fruit.

- A. Rs.100
- B. Rs.200
- C. Rs.150
- D. Rs.250
- E. None of these

Answer: B

$$\text{Let the CP} = x. \text{ Then SP} = 95x/100 = 19x/20$$

$$19x/20 + 20 = 105x/100$$

$$\Rightarrow x = \text{Rs.}200$$

Q.15 A shopkeeper bought 60kg of apple at the rate of Rs.90 per kg. He sold 45% of the total quantity at the rate of Rs.100 per kg. At what price per kg (approximate value) should he sell the remaining quantity to make a 25% overall profit?

- A. Rs.123
- B. Rs.139
- C. Rs.137
- D. Rs.143
- E. Rs.113

Answer: A

$$\begin{aligned} \text{CP} &= 90 \times 60 \\ &= \text{Rs.} 5400 \end{aligned}$$

$$\begin{aligned} 45\% \text{ of } 60\text{kg} \\ &= 60 \times 45/100 \\ &= 27\text{kg} \end{aligned}$$

$$\begin{aligned} \text{SP of } 27\text{kg} \\ &= 27 \times 100 \\ &= \text{Rs.} 2700 \end{aligned}$$

$$\begin{aligned} 25\% \text{ of profit} \\ &= 5400 \times 125/100 \\ &= \text{Rs.} 6750 \end{aligned}$$

$$\text{Amount} = 6750 - 2700 = 4050$$

$$\text{Remaining apple} = 60 - 27 = 33\text{kg}$$

$$\begin{aligned} \text{Required amount} &= 4050/33 \\ &= \text{Rs.} 122.72 \end{aligned}$$

Q.16 If the selling price of the mobile is Rs.6000 and the ratio of the marked to cost price of the mobile is 5: 3. If the shopkeeper offers a discount of 20% on the marked price of the mobile, then find the profit percentage of the mobile?

- A. 28.28%
- B. 44.44%
- C. 33.33%
- D. 48.48%
- E. 52.52%

Answer: C

$$\text{SP of mobile} = \text{Rs.} 6000$$

$$\text{MP of mobile} = 5x$$

$$\text{CP of mobile} = 3x$$

$$5x \times 80/100 = 6000$$

$$x = 1500$$

$$\text{CP of mobile} = 3 \times 1500 = \text{Rs.} 4500$$

$$\text{Profit percentage} = (6000 - 4500)/4500 \times 100$$

$$=$$

$$33.33\%$$

Q.17 Ratio of the cost price of the mobile and the selling price of the laptop is 1:1 and the shopkeeper sold the mobile at a 10% loss and the laptop at a 20% profit. If the selling price of a mobile and laptop together is Rs.19000, what is the approximate total profit or loss?

- A. No gain no loss
- B. Rs.555 loss
- C. Rs.667 profit
- D. Rs.480 loss
- E. Rs.499 profit

Answer: C

$$\text{CP of mobile} = m$$

$$\text{CP of laptop} = l$$

$$\text{SP of mobile} = x$$

$$\text{SP of laptop} = y$$

$$x + y = 19000$$

$$m = y$$

$$x = 90/100 \times m$$

$$x = 90/100 \times y$$

$$90/100 \times y + y = 19000$$

$$190y/100 = 19000$$

$$y = 10000$$

$$x = 9000$$

$$m = 9000 \times 100/90 = 10000$$

$$y = 120/100 \times l$$

$$10000 = 120/100 \times l$$

$$l = 1000000 / 120 = 50000/6$$

$$\text{Total CP} = 10000 + 50000/6 = \text{Rs.} 18333.33$$

$$\text{Profit} = 19000 - 18333.33 = 666.667$$

Q.18 The marked price of a computer is Rs.15000. If a shopkeeper earned a profit of 16 (2/3)% after giving a phone for purchasing the computer and the cost price is 12000, find the percentage of discount which is equal to the price of the phone.

- A. 8 (2/3)%
- B. 7 (2/3)%
- C. 6 (2/3)%
- D. 6 (1/3)%
- E. 9 (2/3)%

Answer: C

$$\text{CP} = 12000$$

$$\text{MP} = 15000$$

$$\text{Profit} = 12000 \times 50/300 = 2000$$

$$\text{Price of phone} = 15000 - (12000 + 2000) = 1000$$

$$\text{Discount} = 1000$$

$$\% \text{ Discount} = (1000/15000) \times 100 = 6 (2/3)\%$$

Q.19 Anmol sold an article marked at 20000 after giving four successive discounts of 10%, 15%, 20% and 25%. Instead, if he sold it

at a 30% discount, find his net gain or loss in the Selling price.

- A. 4820 loss
- B. 2410 gain
- C. 4820 gain
- D. 2410 loss
- E. None of these

Answer: C

1st case:

$$SP = 20000 \times 90/100 \times 85/100 \times 80/100 \times 75/100 = 9180$$

2nd case:

$$= SP = 20000 \times 70/100 = 14000$$

$$\text{Therefore, he would have gained} = 4820$$

Q.20 Rajesh bought 23kg of rice at 30 rupees per kg and 32 kg of rice at 35 rupees per kg. Now he sold the entire rice at 42 rupees per kg. Find the amount of loss/profit made by Rajesh.

- A. Rs.320 profit
- B. Rs.410 profit
- C. Rs.350 profit
- D. Rs.500 profit
- E. None of these

Answer: D

Total cost price

$$= 23 \times 30 + 32 \times 35$$

$$= 690 + 1120$$

$$= 1810$$

Total selling price

$$= 55 \times 42$$

$$= 2310$$

$$\text{Profit} = 2310 - 1810 = \text{Rs.}500$$

Q1. A man can do a work in 20 days and a woman in 15 days. If they work on it together for 5 days, then the fraction of the work that is left is :

- A. 1/12
- B. 1/10
- C. 5/12
- D. 7/15

E. 8/15

Answer: C

Solution:

$$\text{Man's 1 day's work} = 1/20$$

$$\text{Woman's 1 day's work} = 1/15$$

$$(\text{Man} + \text{woman})\text{'s 1 day's work} = (1/20 + 1/15) = 7/60$$

$$(\text{Man} + \text{woman})\text{'s 5 day's work} = (7/60 \times 5) = 7/12$$

$$\text{Thus, Remaining work} = 1 - 7/12 = 5/12$$

Q2. L can finish a work in 16 days and M can do the same work in 12 days. With help of N, they did the work in 4 days only. Then, N alone can do the work in how many days.

- A. 48/5 days
- B. 48/7 days
- C. 48/11 days
- D. 10 days
- E. None of these

Answer: A

Solution:

$$(L + M + N)\text{'s 1 day's work} = 1/4$$

$$L\text{'s 1 day's work} = 1/16$$

$$M\text{'s 1 day's work} = 1/12$$

$$\text{Therefore, N's 1 day's work}$$

$$= 1/4 - (1/16 + 1/12)$$

$$= 1/4 - 7/48$$

$$= 5/48$$

$$\text{So, N alone can do the work in } 48/5 \text{ days.}$$

Q3. P, Q and R can do a job in 20, 30 and 60 days respectively. In how many days can P do the job if he is assisted by Q and R every third day?

- A. 11 days
- B. 15 days
- C. 17 days
- D. 16 days
- E. 18 days

Answer: B

Solution:

$$P\text{'s 2 day's work} = 2/20 = 1/10$$

$$(P + Q + R)\text{'s 1 day's work}$$

$$= (1/20 + 1/30 + 1/60)$$

$$= 6/60 = 1/10$$

$$\text{Job done in 3 days} = (1/10 + 1/10) = 1/5$$

$$\text{Now, } 1/5 \text{ jobs is done in 3 days}$$

$$\text{Whole job will be done in } (3 \times 5) = 15 \text{ days.}$$

Q4. M's efficiency is three times N's efficiency. M can finish a job in 60 days less

than N. If they work together, then in how many days the job will be done.

- A. 20 days
- B. 22.5 days
- C. 25 days
- D. 30 days
- E. 24.5 days

Answer: B

Solution:

The ratio of times taken by M and N = 1 : 3 (Since the efficiency of M is three times to N)
The time difference is $(3 - 1) = 2$ days, while N take 3 days and M takes 1 day.

2 units = 60 days

1 unit = 30 days

So, M takes 30 days to do the job.

And N takes $(30 \times 3) = 90$ days to do the job.

M's 1 day's work = $1/30$

N's 1 day's work = $1/90$

$(M + N)$'s 1 day's work = $(1/30 + 1/90) = 2/45$

M and N together can do the job in $45/2$ days = 22.5 days.

Q5. Ankit alone can do a piece of work in 6 days and Bishal alone in 8 days. Ankit and Bishal undertook to do it for Rs. 4800. With the help of Dinesh, they completed the work in 3 days. How much is to be paid to Dinesh?

- A. Rs. 1375
- B. Rs. 1400
- C. Rs. 1600
- D. Rs. 1800
- E. Rs. 2000

Answer: D

Solution:

Ankit's 1 day work = $1/6$

Bishal's 1 day work = $1/8$

$(\text{Ankit} + \text{Bishal} + \text{Dinesh})$'s 1 day work = $1/3$

Dinesh's 1 day work = $1/3 - (1/6 + 1/8) = 1/24$

Ankit's wages : Bishal's wages : Dinesh's wages

= $1/6 : 1/8 : 1/24$.

Here the (LCM of 6, 8 and 24) is 24. Now, taking LCM we get ratio

= 4 : 3 : 1

Dinesh's share (for 3 days) = $3 \times 1/8 \times 4800 = 1800$

Q6. Vicky completes a job in $45/2$ days. What part of the job will he do in 2 days?

- A. $4/45$
- B. $1/45$
- C. $2/45$
- D. $8/45$
- E. $1/15$

Answer: A

Solution:

We know, if a person does a job in n days, then his 1-day work = $1/n$

Here, $n = 45/2$

Vicky's 1-day work = $2/45$

Thus, Vicky's 2 days work = $2 \times 2/45 = 4/45$

Q7. Karan completes $1/15$ part of a certain job in 1 day. In how many, he will complete the full job.

- A) 30 days
- B) 15 days
- C) 20 days
- D) 5 days
- E) 10 days

Answer: B

Solution:

Here, $1/n = 1/15$

So, $n = 15$

Thus, the required days = 15

Q8. In a factory, 20 people can make 20 toys in 15 days working 10 hours per day. Then, in how many days can 25 persons make 30 toys working 20 hr per day?

- A) 6 days
- B) 9 days
- C) 10 days
- D) 12 days
- E) 15 days

Answer: B

Solution:

Here, $M1 = 20, M2 = 25, D1 = 15, D2 = ?, T1 = 10, T2 = 20, W1 = 20$ and $W2 = 30$.

We know,

$M1 \times D1 \times T1 \times W2 = M2 \times D2 \times T2 \times W1$

$\Rightarrow 20 \times 15 \times 10 \times 30 = 25 \times D2 \times 20 \times 20$

$\Rightarrow D2 = 9$.

Thus, the required day = 9 days

Q9. P, Q and R together can complete a work in 16 days and R alone complete the work in 20 days. If P, Q and R started the work together and after 10 days P and Q left the work, in how many days R alone complete the remaining work?

- A) 12½ days
- B) 20½ days
- C) 4 days
- D) 7½ days
- E) 15 days

Answer: D

Solution:

$$P + Q + R = 16 \text{ days}$$

$$R = 20 \text{ days}$$

$$\text{Total work (LCM of 16 and 20)} = 80$$

$$(P + Q + R) \text{ 's work}$$

$$= 80 / 16$$

$$= 5 \text{ unit}$$

$$\text{Work done by R} = 80 / 20 = 4 \text{ unit}$$

$$(P + Q + R) \text{ 's 10 days work}$$

$$= 5 \times 10$$

$$= 50 \text{ unit}$$

Remaining work

$$= (80 - 50)$$

$$= 30 \text{ unit}$$

Remaining work done by R

$$= 30 / 4$$

$$= 7\frac{1}{2} \text{ days}$$

Q10. M did a piece of work in 5 days. That piece of work was done by N in 9 days. If M and N worked together, they got total wages of Rs 4200. Find the share of N.

- A) 1500
- B) 2000
- C) 1000
- D) 1200
- E) None of these

Answer: A

Solution :

$$\begin{array}{l} \text{Time} = \\ \text{Efficiency} = \end{array} \begin{array}{l} M : N \\ 5 : 9 \\ 9 : 5 \end{array}$$

$$(Time \text{ and efficiency are inversely proportional})$$

$$N \text{ gets} = 4200 \times \frac{5}{14}$$

$$= 1500$$

Thus, N gets the wages of Rs 1500.

Q11. P and Q can do a job in 3 days. Q and R can do the same job in 9 days, while R and P can do it in 12 days. In how many days the job will be finished when P, Q and R working together.

- A) 72/19 days
- B) 83/10 days.
- C) 61/3 days.

- D) 67/4 days
- E) None of these

Answer: A

Solution:

$$\text{Here, } (P + Q) \text{ 's 1 day's work} = 1/3$$

$$(Q + R) \text{ 's 1 day's work} = 1/9$$

$$\text{and } (R + P) \text{ 's 1 day's work} = 1/12$$

$$\text{Now, } 2 (P + Q + R) \text{ 's 1 day's work} =$$

$$(1/3 + 1/9 + 1/12)$$

$$= 19/36$$

$$(P + Q + R) \text{ 's 1 day's work} = 19 / (36 \times 2) = 19/72$$

$$\text{Hence, } (P + Q + R) \text{ complete the work in} = 72/19 \text{ days}$$

Q12. E and F are two friends working together to finish a work in 24 days and E alone can do the same work in 36 days. In how many days can F alone complete the work?

- A) 36 days
- B) 24 days
- C) 72 days
- D) 48 days
- E) None of these

Answer: C

Solution:

$$(E + F) \text{ 's 1 days work} = 1/24$$

$$E \text{ 's 1-day work} = 1/36$$

$$F \text{ 's 1 day work} = (1/24 - 1/36) = 1/72$$

Thus, the time is taken by F to finish the work alone = 72 days

Q13. If 12 men or 18 boys can build a wall in 48 days, then how long will 6 men or 9 boys build the wall?

- A) 48 days
- B) 36 days
- C) 64 days
- D) 72 days
- E) 96 days

Answer: E

Solution :

$$12 \text{ men} = 18 \text{ boys}$$

$$2 \text{ men} = 3 \text{ boys}$$

$$\text{Now, } 12 \text{ men} + 2 \times 18/3 \text{ men} = 24 \text{ Men}$$

$$\text{And, } 6 \text{ men} + 2 \times 9/3 \text{ men} = 12 \text{ men}$$

$$\text{Here, } M1 = 24, M2 = 12, D1 = 48, D2 = ?$$

According to the formula,

$$M1 \times D1 = M2 \times D2$$

$$\Rightarrow 24 \times 48 = 12 \times D2$$

$$\Rightarrow D2 = 96$$

Q14. Akash can reap a field in 45 days and Vishal is 200% more expert than Akash to reap the field, then find total time taken to reap the field by Vishal.

- A) 15
- B) 20
- C) 22
- D) 25
- E) 30

Answer: A

Solution:

According to the question, Vishal is more efficient than Akash. So, he takes less days to complete the work.

Let, Vishal takes time = x days

So, Akash takes time = $3x$ days

According to the question,

$$3x = 45$$

$$x = 15$$

Thus, Vishal takes time 15 days.

Q15. Two brothers (younger and older) can do a piece of work in 70 and 60 days respectively. They began to work together, but the younger brother leaves after some days and the older brother finished the remaining work in 47 days. After how many days did the younger brother leave?

- A) 14 days
- B) 16 days
- C) 11 days
- D) 12 days
- E) 7 days

Answer: E

Solution:

The Older brother would have done $47/60$ work in 47 days.

The remaining work = $(1 - 47/60) = 13/60$ must have done by them together.

$$\text{Two brothers 1 day work} = (1/70 + 1/60) = 13/420$$

So, they would have done $13/60$ work in $420/13 \times 13/60 = 7$ days.

Therefore, The younger brother left the work after 7 days.

Q1: Two pipes A and B can fill a tank separately in 12 and 16 hours respectively. If

both of them are opened together when the tank is initially empty, how much time will it take to completely fill the tank?

Solution:

Part of tank filled by pipe A in one hour working alone = $1/12$ Part of tank filled by pipe B in one hour working alone = $1/16 \Rightarrow$ Part of tank filled by pipe A and pipe B in one hour working together = $(1/12) + (1/16) = 7/48$ Therefore, time taken to completely fill the tank if both A and B work together = $48/7$ hours

Another Method

Let the capacity of tank be LCM $(12, 16) = 48$ units \Rightarrow Efficiency of pipe A = $48/12 = 4$ units / hour \Rightarrow Efficiency of pipe B = $48/16 = 3$ units / hour \Rightarrow Combined efficiency of pipes A and B = 7 units / hour Therefore, time taken to completely fill the tank = $48/7$ hours.

Q2: Three pipes A, B, and C are connected to a tank. Out of the three, A and B are the inlet pipes and C is the outlet pipe. If opened separately, A fills the tank in 10 hours, B fills the tank in 12 hours and C empties the tank in 30 hours. If all three are opened simultaneously, how much time does it take to fill / empty the tank?

Solution :

Part of tank filled by pipe A in one hour working alone = $1/10$ Part of tank filled by pipe B in one hour working alone = $1/12$ Part of tank emptied by pipe C in one hour working alone = $1/30 \Rightarrow$ Part of tank filled by pipes A, B and C in one hour working together = $(1/10) + (1/12) - (1/30) = 3/20$ Therefore, time taken to completely fill the tank if both A and B work together = $20/3$ hours = 6 hours 40 minutes

Another Method

Let the capacity of tank be LCM $(10, 12, 30) = 60$ units \Rightarrow Efficiency of pipe A = $60/10 = 6$ units / hour \Rightarrow Efficiency of pipe B = $60/12 = 5$ units / hour \Rightarrow Efficiency of pipe C = $-60/30 = -2$ units / hour (Here, '-' represents outlet pipe) \Rightarrow Combined efficiency of pipes A, B and C = $6 + 5 - 2 = 9$ units / hour Therefore, time taken to completely fill the tank = $60/9 = 6$ hours 40 minutes.

Q3: Three pipes A, B, and C are connected to a tank. Out of the three, A is the inlet pipe and B and C are the outlet pipes. If opened

separately, A fills the tank in 10 hours, B empties the tank in 12 hours and C empties the tank in 30 hours. If all three are opened simultaneously, how much time does it take to fill / empty the tank ?

Solution:

Part of tank filled by pipe A in one hour working alone = $1/10$ Part of tank emptied by pipe B in one hour working alone = $1/12$ Part of tank emptied by pipe C in one hour working alone = $1/30$ \Rightarrow Part of tank filled by pipes A, B and C in one hour working together = $(1/10) - (1/12) - (1/30) = -1/60$ Therefore, time taken to completely empty the tank if all pipes are opened simultaneously = $1/60$ hours = 60 hours

Another Method

Let the capacity of tank be LCM (10, 12, 30) = 60 units \Rightarrow Efficiency of pipe A = $60/10 = 6$ units / hour \Rightarrow Efficiency of pipe B = $-60/12 = -5$ units / hour (Here, '-' represents outlet pipe) \Rightarrow Efficiency of pipe C = $-60/30 = -2$ units / hour (Here, '-' represents outlet pipe) \Rightarrow Combined efficiency of pipes A, B and C = $6 - 5 - 2 = -1$ units / hour (Here, '-' represents outlet pipe) Therefore, time taken to completely empty the tank = $60 / (1) = 60$ hours.

Q4: A cistern has two pipes. Both working together can fill the cistern in 12 minutes. First pipe is 10 minutes faster than the second pipe. How much time would it take to fill the cistern if only second pipe is used ?

Solution:

Let the time taken by first pipe working alone be 't' minutes. \Rightarrow Time taken by second pipe working alone = $t + 10$ minutes. Part of tank filled by pipe A in one hour working alone = $1/t$ Part of tank filled by pipe B in one hour working alone = $1/(t + 10)$ \Rightarrow Part of tank filled by pipe A and B in one hour working together = $(1/t) + (1/(t+10)) = (2t + 10) / [t \times (t + 10)]$ But we are given that it takes 12 minutes to completely fill the cistern if both pipes are working together. $\Rightarrow (2t + 10) / [t \times (t + 10)] = 1/12 \Rightarrow t \times (t + 10) / (2t + 10) = 12 \Rightarrow t^2 + 10t = 24t + 120 \Rightarrow t^2 - 14t - 120 = 0 \Rightarrow (t - 20)(t + 6) = 0 \Rightarrow t = 20$ minutes (Time cannot be negative) Therefore, time taken by second pipe working alone = $20 + 10 = 30$ minutes

Another Method

Let the time taken by first pipe working alone be 't' minutes. \Rightarrow Time taken by second pipe working alone = $t + 10$ minutes. Let the capacity of cistern be $t \times (t + 10)$ units. \Rightarrow Efficiency of first pipe = $t \times (t + 10) / t = (t + 10)$ units / minute \Rightarrow Efficiency of second pipe = $t \times (t + 10) / (t + 10) = t$ units / minute \Rightarrow Combined efficiency of pipes = $(2t + 10)$ units / minute \Rightarrow Time taken to fill the cistern completely = $t \times (t + 10) / (2t + 10)$ But we are given that it takes 12 minutes to completely fill the cistern if both pipes are working together. $\Rightarrow t \times (t + 10) / (2t + 10) = 12 \Rightarrow t^2 + 10t = 24t + 120 \Rightarrow t^2 - 14t - 120 = 0 \Rightarrow (t - 20)(t + 6) = 0 \Rightarrow t = 20$ minutes (Time cannot be negative) Therefore, time taken by second pipe working alone = $20 + 10 = 30$ minutes.

Q5: Three pipes A, B and C are connected to a tank. Out of the three, A and B are the inlet pipes and C is the outlet pipe. If opened separately, A fills the tank in 10 hours and B fills the tank in 30 hours. If all three are opened simultaneously, it takes 30 minutes extra than if only A and B are opened. How much time does it take to empty the tank if only C is opened?

Solution :

Let the capacity of tank be LCM (10, 30) = 30 units \Rightarrow Efficiency of pipe A = $30/10 = 3$ units / hour \Rightarrow Efficiency of pipe B = $30/30 = 1$ units / hour \Rightarrow Combined efficiency of pipes A and B = 4 units/hour Therefore, time taken to completely fill the tank if only A and B are opened = $30/4 = 7$ hours 30 minutes \Rightarrow Time taken to completely fill the tank if all pipes are opened = 7 hours 30 minutes + 30 minutes = 8 hours \Rightarrow Combined efficiency of all pipes = $30/8 = 3.75$ units / hour Now, efficiency of pipe C = Combined efficiency of all three pipes - Combined efficiency of pipes A and B Therefore, efficiency of pipe C = $4 - 3.75 = 0.25$ units / hour Thus, time taken to empty the tank if only C is opened = $30/0.25 = 120$ hours.

Q6: Time required by two pipes A and B working separately to fill a tank is 36 seconds and 45 seconds respectively. Another pipe C can empty the tank in 30 seconds. Initially, A and B are opened and

after 7 seconds, C is also opened. In how much more time the tank would be completely filled?

Solution:

Let the capacity of the tank be LCM (36, 45, 30) = 180 units \Rightarrow Efficiency of pipe A = $180 / 36 = 5$ units / second \Rightarrow Efficiency of pipe B = $180 / 45 = 4$ units / second \Rightarrow Efficiency of pipe C = $180 / 30 = 6$ units / second Now, for the first 7 seconds, A and B were open. \Rightarrow Combined efficiency of A and B = $5 + 4 = 9$ units / second \Rightarrow Part of the tank filled in 7 seconds = $7 \times 9 = 63$ units \Rightarrow Part of tank empty = $180 - 63 = 117$ units Now, all pipes are opened. \Rightarrow Combined efficiency of all pipes = $5 + 4 - 6 = 3$ units / second Therefore, more time required = $117 / 3 = 39$ seconds.

Q7: Two pipes A and B can fill a tank in 20 hours and 30 hours respectively. If both the pipes are opened simultaneously, find after how much time should pipe B be closed so that the tank is full in 18 hours?

Solution:

Let the capacity of the tank be LCM (20, 30) = 60 units \Rightarrow Efficiency of pipe A = $60 / 20 = 3$ units / hour \Rightarrow Efficiency of pipe B = $60 / 30 = 2$ units / hour \Rightarrow Combined efficiency of pipes A and B = 5 units / hour Let both A and B be opened for 'n' hours and then, B be closed and only A be opened for the remaining '18 - n' hours. $\Rightarrow 5n + 3 \times (18 - n) = 60 \Rightarrow 2n + 54 = 60 \Rightarrow 2n = 6 \Rightarrow n = 3$ Therefore, B should be closed after 3 hours.

Q1: A 100 m long train moving at a speed of 60 km/hr passes a man standing on the pavement near a railway track. Find the time taken by the train to pass the man.

Solution:

Length of the train = 100 m = 0.1 km

Speed of the train = 60 km / hr

So, the time taken by the train to pass the man = time taken to cover 0.1 km at the speed of 60 km/hr

Therefore, time taken by the train to pass the man = $0.1 / 60$ hour = $(0.1 / 60) \times 3600$ sec = 6 sec

Q2: How long does a train 1000 m long moving at a speed of 90 km/hr would take to pass through a 500 m long bridge?

Solution:

Here, the time taken by the train to pass the bridge completely would be the time it takes to cover $1000 + 500 = 1500$ m at the speed of 90 km/hr = $90 \times (5/18) = 25$ m / sec. Therefore, time required = $1500 / 25 = 60$ sec = 1 minute

Q3: A man standing near a railway track observes that a train passes him in 80 seconds but to pass by a 180 m long bridge, the same train takes 200 seconds. Find the speed of the train.

Solution:

Let the length of the train be L meters.

\Rightarrow The train covers L meters in 80 seconds and L + 180 meters in 200 seconds, with the same speed.

We know that Speed = Distance / Time.

\Rightarrow Speed = $L / 80 = (L + 180) / 200$

$\Rightarrow L / 80 = (L + 180) / 200$

$\Rightarrow 2.5 L = L + 180$

$\Rightarrow 1.5 L = 180$

$\Rightarrow L = 120$

Thus, speed of the train = $120 / 80 = 1.5$ m / sec

Q4: Two trains 140 m and 160 m long are moving towards each other on parallel tracks with speeds of 40 km/hr and 50 km/hr respectively. How much time would they take to pass each other completely?

Solution :

Total distance to be covered = $140 + 160$ m = 300 m

Relative speed = $40 + 50 = 90$ km / hr = $90 \times (5 / 18)$ m / sec = 25 m / sec

Therefore, time taken to pass each other = $300 / 25 = 12$ sec

Q5: Two trains 140 m and 160 m long are moving in the same direction on parallel tracks with speeds of 40 km/hr and 50 km/hr respectively. How much time would the faster train require to overtake the slower train?

Solution:

Total distance to be covered = $140 + 160$ m = 300 m

Relative speed = $50 - 40 = 10 \text{ km/hr} = 10 \times (5/18) \text{ m/sec} = 50/18 \text{ m/sec}$

Therefore, the time is taken by the faster train to overtake the slower train = $300 / (50/18) = 108 \text{ sec}$

Q6: A 500 m long train takes 36 seconds to cross a man walking in the opposite direction at the speed of 10 km/hr. Find the speed of the train.

Solution:

Let the speed of the train be $T \text{ km/hr}$.

\Rightarrow Relative speed = $T + 10 \text{ km/hr}$

\Rightarrow Length of the train = $500 \text{ m} = 0.5 \text{ km}$

We know that Distance = Speed \times Time

$\Rightarrow 0.5 = (T + 10) \times (36 / 3600)$

$\Rightarrow 50 = T + 10$

$\Rightarrow T = 40 \text{ km/hr}$

Therefore, the speed of the train is 40 km/hr .

Q7: A non-stop train started from Delhi towards Mumbai and at the same time, another non-stop train started from Mumbai towards Delhi. If after meeting in Bhopal they took 9 and 16 hours respectively to reach their destinations, find the speed of the train that started from Delhi, given that the speed of the train that started from Mumbai was moving at a speed of 90 km/hr.

Solution:

We know that for two trains starting at the same time, $S_1 : S_2 = T_2^{1/2} : T_1^{1/2}$

Here, $S_2 = 90 \text{ km/hr}$

$T_1 = 9 \text{ hrs}$

$T_2 = 16 \text{ hrs}$

$\Rightarrow S_1 : 90 = 4 : 3$

$\Rightarrow S_1 = 120 \text{ km/hr}$

Therefore, the speed of the train that started from Delhi = 120 km/hr

Q8: A boatman can row a boat upstream at 14 km/hr and downstream at 20 km/hr. Find the speed of the boat in still water and the speed of the stream.

Solution:

We are given that speed downstream, $D = 20 \text{ km/hr}$ and speed upstream, $U = 14 \text{ km/hr}$

Therefore, Speed of boat in still water = $0.5 \times (D + U) \text{ km/hr} = 0.5 \times (14 + 20) = 17 \text{ km/hr}$

Also, speed of the stream = $0.5 \times (D - U) \text{ km/hr} = 0.5 \times (20 - 14) = 3 \text{ km/hr}$

Another method :

Speed of the stream = $0.5 \times (D - U) = 0.5 \times 6 = 3 \text{ km/hr}$

Speed of the boat in still water = Speed of the stream + Speed Upstream = $3 + 14 = 17 \text{ km/hr}$

Q9: A boatman can row a boat at the speed of 5 km upstream and 15 km downstream. To cover upstream he needs 2.5 hours and to cover downstream, he needs 10 hours. Find the speed of the stream and the speed of the boat in still water.

Solution:

We are given that the boatman covers 5 km upstream in 2.5 hours and 15 km downstream in 10 hours.

\Rightarrow Speed upstream, $U = 5 / 2.5 = 2 \text{ km/hr}$

\Rightarrow Speed downstream, $D = 15 / 1.5 = 10 \text{ km/hr}$

Therefore, Speed of boat in still water = $0.5 \times (D + U) \text{ km/hr} = 0.5 \times (10 + 2) = 6 \text{ km/hr}$

Also, speed of the stream = $0.5 \times (D - U) \text{ km/hr} = 0.5 \times (10 - 2) = 4 \text{ km/hr}$

Q10: A man has to go from a port to an island and return. He can row a boat with a speed of 7 km/hr in still water. The speed of the stream is 2 km/hr. If he takes 56 minutes to complete the round trip, find the distance between the port and the island.

Solution :

Speed upstream = $7 - 2 = 5 \text{ km/hr}$

Speed downstream = $7 + 2 = 9 \text{ km/hr}$

Let the distance between the port and the island be $D \text{ km}$. Also, we know that Time = Distance / Speed

$\Rightarrow (D/5) + (D/9) = 56/60$

$\Rightarrow (14 D) / 45 = 56 / 60$

$\Rightarrow D = 3 \text{ km}$

Therefore, the distance between the port and the island = 3 km

Q11: In a boat race, a person rows a boat 6 km upstream and returns to the starting point in 4 hours. If the speed of the stream is 2 km/hr, find the speed of the boat in still water.

Solution:

Let the speed of the boat in still water be $B \text{ km/hr}$.

\Rightarrow Speed upstream = $(B - 2) \text{ km/hr}$

\Rightarrow Speed downstream = $(B + 2)$ km / hr
 We know that Time = Distance / Speed
 $\Rightarrow 6/(B-2) + 6/(B+2) = 4$
 $\Rightarrow 6B + 12 + 6B - 12 = 4(B - 2)(B + 2)$
 $\Rightarrow 12B = 4(B - 2)(B + 2)$
 $\Rightarrow 3B = B^2 - 4$
 $\Rightarrow B^2 - 3B - 4 = 0$
 $\Rightarrow (B + 1)(B - 4) = 0$
 $\Rightarrow B = 4$ km/hr (Speed cannot be negative)

Q12: A racer can row a boat 30 km upstream and 44 km downstream in 10 hours. Also, he can row 40 km upstream and 55 km downstream in 13 hours. Find the speed of the boat in still water and the speed of the stream.

Solution:

Let the speed upstream be U km/hr and the speed downstream be D km/hr.
 We know that Distance / Speed = Time
 $\Rightarrow (30 / U) + (44 / D) = 10$ and $(40 / U) + (55 / D) = 13$
 Solving the above pair of linear equations, we get
 $D = 11$ km/hr
 $U = 5$ km/hr
 Therefore, Speed of boat in still water = $0.5 \times (D + U)$ km / hr = $0.5 \times (11 + 5) = 8$ km / hr
 Also, speed of the stream = $0.5 \times (D - U)$ km / hr = $0.5 \times (11 - 5) = 3$ km / hr

Q. Find the HCF and LCM of $1/3$, $8/7$, $9/11$.

Solution: LCM of given numbers :
 $LCM(1,8,9)/HCF(3,7,11) = 72/1$.

HCF of given numbers :

$HCF(1,8,9)/LCM(3,7,11) = 1/231$.

Sample Problems on HCF and LCM:

Q1: Two numbers are in the ratio of 5:11. If their HCF is 7, find the numbers.

Solution: Let the numbers be $5m$ and $11m$.
 Since 5:11 is already the reduced ratio, 'm' has to be the HCF. So, the numbers are $5 \times 7 = 35$ and $11 \times 7 = 77$.

Q2: Find the length of the plank which can be used to measure exactly the lengths 4 m 50 cm, 9 m 90 cm, and 16 m 20 cm in the least time.

Solution: Let us first convert each length to cm. So, the lengths are 450 cm, 990 cm, and 1620 cm. Now, we need to find the length of the largest plank that can be used to measure these lengths as the largest plank will take the least time. For this, we need to take the HCF of 450, 990, and 1620. $450 = 2 \times 3 \times 3 \times 5 \times 5 = 2 \times 3^2 \times 5^2$, $990 = 2 \times 3 \times 3 \times 5 \times 11 = 2 \times 3^2 \times 5 \times 11$, $1620 = 2 \times 2 \times 3 \times 3 \times 3 \times 3 \times 5 = 2^2 \times 3^4 \times 5$. Therefore, $HCF(450, 990, 1620) = 2 \times 3 \times 3 \times 5 = 90$. Thus, we need a plank of length 90 cm to measure the given lengths in the least time.

Q3: Find the greatest number which on dividing 70 and 50 leaves remainders 1 and 4 respectively.

Solution: The required number leaves remainders 1 and 4 on dividing 70 and 50 respectively. This means that the number exactly divides 69 and 46. So, we need to find the HCF of 69 (3×23) and 46 (2×23). $HCF(69, 46) = 23$. Thus, 23 is the required number.

Q4: Find the largest number which divides 64, 136, and 238 to leave the same remainder in each case.

Solution: To find the required number, we need to find the HCF of $(136-64)$, $(238-136)$, and $(238-64)$, i.e., $HCF(72, 102, 174)$. $72 = 2^3 \times 3^2$, $102 = 2 \times 3 \times 17$, $174 = 2 \times 3 \times 29$. Therefore, $HCF(72, 102, 174) = 2 \times 3 = 6$ hence, 6 is the required number.

Q5: Find the least number which when divided by 5,7,9 and 12, leaves the same remainder 3 in each case.

Solution: In these types of questions, we need to find the LCM of the divisors and add the common remainder (3) to it. So, $LCM(5, 7, 9, 12) = 1260$. Therefore, required number = $1260 + 3 = 1263$.

Q6: Find the largest four-digit number exactly divisible by 15,21 and 28.

Solution: The largest four-digit number is 9999. Now, $LCM(15, 21, 28) = 420$. On dividing 9999 by 420, we get 339 as the remainder. Therefore, the required number is $9999 - 339 = 9660$.

Q7: The policemen at three different places on the ground blow a whistle after every 42 sec, 60 sec, and 78 sec respectively. If they all blow the whistle simultaneously at

9:30:00 hours, then at what time do they whistle again together.

Solution: They all will whistle again at the same time after an interval that is equal to the LCM of their individual whistle-blowing cycles. So, LCM (42, 60, 78) = $2 \times 3 \times 7 \times 10 \times 13 = 5460$ Therefore, they will blow the whistle again simultaneously after 5460 sec, i.e., after 1 hour 31 minutes, i.e., at 11:01:00 hours.

Q8: Find the least number which when divided by 6,7,8 leaves a remainder of 3, but when divided by 9 leaves no remainder.

Solution: LCM (6, 7, 8) = 168 So, the number is of the form $168m + 3$. Now, $168m + 3$ should be divisible by 9. We know that a number is divisible by 9 if the sum of its digits is a multiple of 9. For $m = 1$, the number is $168 + 3 = 171$, the sum of whose digits is 9. Therefore, the required number is 171.

Q9: Two numbers are in the ratio 2:3. If the product of their LCM and HCF is 294, find the numbers.

Solution: Let the common ratio be 'm'. So, the numbers are $2m$ and $3m$. Now, we know that the Product of numbers is = Product of LCM and HCF. $\Rightarrow 2m \times 3m = 294 \Rightarrow m^2 = 49 \Rightarrow m = 7$ Therefore, the numbers are 14 and 21.

Q10: A rectangular field of dimension 180m x 105m is to be paved by identical square tiles. Find the size of each tile and the number of tiles required.

Solution: We need to find the size of a square tile such that a number of tiles cover the field exactly, leaving no area unpaved. For this, we find the HCF of the length and breadth of the field. HCF (180, 105) = 15 Therefore, size of each tile = $15m \times 15m$ Also, number of tiles = area of field / area of each tile \Rightarrow Number of tiles = $(180 \times 105) / (15 \times 15) \Rightarrow$ Number of tiles = 84 Hence, we need 84 tiles, each of size $15m \times 15m$.

Q11: Three rectangular fields having areas of 60 m², 84 m², and 108 m² are to be divided into identical rectangular flower beds, each having a length of 6 m. Find the breadth of each flower bed.

Solution: We need to divide each large field into smaller flower beds such that the area of each bed is same. So, we find the HCF of the

larger fields which gives us the area of the smaller field. HCF (60, 84, 108) = 12 Now, this HCF is the area (in m²) of each flower bed. Also, area of a rectangular field = Length x Breadth $\Rightarrow 12 = 6 \times$ Breadth \Rightarrow Breadth = 2 m Hence, each flower bed would be 2 m wide.

Q12: Find the maximum number of students among whom 182 chocolates and 247 candies can be distributed such that each student gets the same number of each. Also, find the number of chocolates and candies each student will get.

Solution: We need to find the HCF of the number of chocolates and candies available, which would give us the number of students. HCF (182, 247) = 13 So, there can be 13 students. Also, Number of chocolates for each student = $182 / 13 = 14$ Number of toffees for each student = $247 / 13 = 19$

Q13: A bell rings every 8 minutes. A second bell rings every 12 minutes. If all the two bells ring at the same time at 4 AM, at what other time will they all ring together?

Solution: We need to find LCM of 8 and 12. LCM of 8 and 12 will be 24min. The bells will ring together again at 4 AM + 24 minutes = 4:24 AM.

Example 1: Find the Compound Interest when principal = Rs 6000, rate = 10% per annum and time = 2 years.

Solution:

Interest for first year = $(6000 \times 10 \times 1) / 100 = 600$

Amount at the end of first year = $6000 + 600 = 6600$

Interest for second year = $(6600 \times 10 \times 1) / 100 = 660$

Amount at the end of second year = $6600 + 660 = 7260$

Compound Interest = $7260 - 6000 = 1260$

Example 2: What will be the compound interest on Rs 8000 in two years when the rate of interest is 2% per annum?

Solution:

Given,

- Principal $P = 8000$
- Rate $r = 2\%$
- Time = 2 years

by formula

$$A = P (1 + R/100)^n$$

$$A = 8000 (1 + 2/100)^2 = 8000 (102/100)^2$$

$$A = 8323$$

$$\text{Compound interest} = A - P = 8323 - 8000 = \text{Rs } 323$$

Example 3: Hari deposited Rs. 4000 with a finance company for 2 years at an interest of 5% per annum. What is the compound interest that Rohit gets after 2 years?

Solution:

Given,

- Principal $P = 4000$
- Rate $r = 5\%$
- Time = 2 years

By formula,

$$A = P (1 + R/100)^n$$

$$A = 4000 (1 + 5/100)^2$$

$$A = 4000 (105/100)^2$$

$$A = 4410$$

$$\text{Compound Interest} = A - P = 4410 - 4000 = 410$$

Example 4: Find the compound interest on Rs. 2000 at the rate of 4% per annum for 1.5 years. When interest is compounded half-yearly?

Solution:

Given,

- Principal $p = 2000$
- Rate $r = 4\%$
- Time = 1.5 (i.e 3 half years)

by formula ,

$$A = P (1 + R/200)^{2n}$$

$$A = 2000 (1 + 4/200)^3$$

$$A = 2000 (204/200)^3$$

$$A = 2122$$

$$\text{Compound Interest} = A - P = 2122 - 2000 = 122$$

Example 5: What is the compound interest on 10000 for one year at the rate of 20% per annum, if the interest is compounded quarterly?

Solution:

Given,

- Principal $P = \text{Rs } 10000$
- Rate $R = 12\%$ ($12/4 = 3\%$ per quarter year)
- Time = 1 year ($1 \times 4 = 4$ quarters)

By Formula,

$$A = P (1 + R/100)^n$$

$$A = 10000 (1 + 3/100)^4$$

$$A = 10000 (103/100)^4$$

$$A = 11255$$

$$\text{Compound Interest} = A - P = 11255 - 10000 = 1255$$

Example 6: Find the compound interest at the rate of 5% per annum for 2 years on that principal which in 2 years at the rate of 5% per annum given Rs. 400 as simple interest.

Solution:

Given,

- Simple Interest $SI = 400$
- Rate $R = 5\%$
- Time $T = 2$ years

By Formula,

$$\text{Simple Interest} = (P \times T \times R)/100$$

$$\Rightarrow P = (SI \times 100)/T \times R$$

$$P = (400 \times 100)/2 \times 5 \text{ Rate of Compound Interest} = 5\%$$

$$P = 40000/10 = \text{Rs } 4000$$

$$\text{Time} = 2 \text{ years}$$

By Formula,

$$A = P (1 + R/100)^n$$

$$A = 4000 (1 + 5/100)^2$$

$$A = 4410$$

$$\text{Compound Interest} = A - P = 4410 - 4000 = 410$$

Example 7: Find the compound interest on Rs 30000 at 7% interest compounded annually for two years.

Solution:

- Principal $P = \text{Rs } 30000$
- Rate $R = 7\%$
- Time = 2 year

By formula,

$$A = P (1 + R/100)^n$$

$$A = 30000 (1 + 7/100)^2$$

$$A = 30000 (107/100)^2$$

$$A = 34347$$

$$\text{Compound Interest} = A - P = 34347 - 30000 = 4347$$

Example 1. Is the ratio 5:10 proportional to 1:2?

Solution:

5:10 divided by 5 gives 1:2. Thus, they are same to each other. So we can say that 5:10 is proportional to 1:2.

Example 2. Given a constant k, such that k:5 is proportional to 10:25. Find the value of k.

Solution:

Since k:5 is proportional to 10:25, we can write,
 $k / 5 = 10 / 25$

$$k = 10/25 \times 5 = 2$$

So, the value of k is 2.

Example 3. Divide 100 into two parts such that they are proportional to 3:5.

Solution:

Let's the value of two parts are 3k and 5k, where k is a constant.

Since the total sum of two parts is 100, we can write,

$$3k + 5k = 100$$

$$8k = 100$$

$$k = 12.5$$

So, the parts are $3k = 3 \times 12.5 = 37.5$ and $5k = 5 \times 12.5 = 62.5$

Example 4. If $x^2 + 6y^2 = 5xy$, then find the value of x/y.

Solution:

Given, $x^2 + 6y^2 = 5xy$.

Dividing the equation by y^2 , we get

$$(x/y)^2 + 6 = 5(x/y)$$

Let's $x/y = t$

So, we can write,

$$t^2 + 6 = 5t$$

$$t^2 - 5t + 6 = 0$$

$$(t - 2)(t - 3) = 0$$

$$t = 2 \text{ or } t = 3$$

Since, $t = x/y$, we get

$$x/y = 2 \text{ or } x/y = 3$$

Question 1: A quantity is 25% of 200. Find the quantity?

Solution:

$$\text{Quantity} = (25/100) * 200 = 50$$

Question 2: If 60% of a quantity(x) is 300, then find the quantity x?

Solution:

$$60x/100 = 300$$

$$\Rightarrow x = 30000/60 = 500$$

The quantity x is 500.

Question 3: A cricket team won 3 matches out of a total of 5 matches in a series. Depict the winning ratio and percentage?

Solution:

Winning Ratio: 3/5

$$\text{Winning Percentage: } (3/5) * 100 = 60\%$$

Question 4: Winning percentage of a cricket match series is 60%. Find the total matches won out of 5 in the cricket series?

Solution:

$$\text{Matches Won} = (60/100) * 5 = 3$$

Question 5: A nursery has 10000 plants. 10% of the plants are oranges and 3% are mangos plants. What is the total number of other plants?

Solution:

$$\text{Total Plants} = 10000$$

Orange plants = 10% of total

Mango Plants = 3% of total

Other plants = 100% - (10% + 3%) = 87% of total

$$= (87/100) * 10000$$

$$= 8700$$

The total number of other plants are 8700.

Question 6: GeeksforGeeks has 90 engineer employees. In this company, engineers constitute 50% of its workforce. How many people are employed in the company?

Solution:

50% of total workforce = 90 engineers

Let total workforce be x

$$\text{Then, } (50/100) * x = 90$$

$$x = (90 * 100) / 50$$

$$x = 180$$

So, the total workforce of GeeksforGeeks is 180 employees.

Direction (1-9): In each of the following questions, four sentences are given, and you have to choose the one which has some or any grammatical error in it. If all the given four sentences are correct, choose Option – E as your choice.

1.

- A. She hasn't until had her doors mended by the carpenter.
- B. She hasn't had her doors mended by the carpenter already.
- C. She hasn't her doors mended by the carpenter yet.
- D. She hasn't had her doors mended by the carpenter yet.
- E. None of the above.

Answer: Option – D

Solution:

'Yet' denotes that anything that we anticipated has occurred or has not occurred. The perfect tense is used because it describes a specific event. It's typically placed at the end of a sentence. Already denotes that something occurred sooner than anticipated. Since the action (mend) is done yet, we cannot use it. This particular example uses the verb 'have' both as an auxiliary and main verb. The main verb is followed by an object (the door). Hence the correct answer is D.

2.

- A. All that I have described have been taken place in the last four decades.
- B. Dismayed by the symptoms of Dunlaps Disease (his belly lapped over his belt); Santa went to Weight Watchers.
- C. It being a pleasant morning, he went out for a walk.
- D. Disputes are maintained by those who are nothing else to do. You should visit France when you had been to London.
- E. All are correct.

Answer: Option – B

Solution: "Have been taken" should be

substituted with "has taken" in Option A. Option B is grammatically correct. In Option C, "It" needs to be removed. "Who are" should be changed with "who have" in Option D. In Option E, "had been" will be replaced by "when you leave." As a result, the right response is option B.

3.

- A. While not many favour rules, they do bring a sense of structure to an otherwise chaotic existence.
- B. Discipline, integrity, and morality is the three rungs that form the basic foundation of the school.
- C. She sat at her desk pensive trying to recollect her childhood memories so she could pen them down.
- D. For Sam, the beginning of the exam season was marked by a messy table and a whiteboard scribbled behind recognition.
- E. All are correct.

Answer: Option – A

Solution:

Statement B: The error lies in the use of the singular verb 'is' to relate to three nouns connected by the conjunction 'and' (when two or more nouns are connected by the conjunction 'and', it necessitates the use of a plural verb), causing a discord in the subject-verb agreement.

Statement C: The error lies in the use of the adjective 'pensive' to qualify the preceding verb 'sat'. Replacing it with the adverb 'pensively' will make the sentence grammatically correct and contextually meaningful.

Statement D: The error lies in the use of the preposition 'behind', meaning at the back of something, instead of the preposition 'beyond', meaning further away. Thus, Option "A" is the correct response.

4.

- A. She had a habit of altering her persona depending on whom she was interacting with.
- B. The added benefits of the package included the provision of a complementary buffet for breakfast.
- C. The bed and breakfast at the end of the town

was known for its hospitality as much as it was known for being a haunted house.

D. Illegitimising recreational drug use may be adding to the crisis rather than solving the problem of drug abuse.

E. All are correct.

Answer: E

Solution: All the given sentences are contextually meaningful and grammatically correct. As a result, Option E is the proper response.

5.

A. The bouquet was adorned with garden-fresh chrysanthemums, roses, and lilies, and embellished by a wicker basket.

B. The embellishments on the crown made it a heavy burden for the monarch, both literally and figurative.

C. Eagerly awaiting the vacation, Stella was justifiable heartbroken when the flight got cancelled.

D. The excavation unearthed the remnants by a civilization that dated back to the eleventh century.

E. All are correct.

Answer: Option – A

Solution:

Statement B: The error lies in the use of the adjective 'figurative' instead of the adverb 'figuratively', making the sentence grammatically incorrect.

Statement C: The error lies in the use of the adjective 'justifiable' instead of the adverb 'justifiably' to better qualify the following adjective 'heartbroken'.

Statement D: The error lies in the use of the preposition 'by' meaning 'through the action or presence of' instead of the preposition 'of', meaning (something) indicating an ancestral source or origin of descent.

Thus, Option C is the correct answer.

6.

A. Seventeenth Century England abounded in fops and belles but lacked decent human beings.

B. Aristocracy comes with its own set of hypocrisy, which puts the common man's flaws

to shameful.

C. The pendant glittered in the sun, attracting many a jealous eyes to it.

D. Fancy cutlery has always been attractive, but those with floral designs were all the raging in the mid-50s.

E. All are correct.

Answer: Option – A

Solution:

Statement B: The error lies in the use of the adjective 'shameful' instead of the noun 'shame', making its use contextually incorrect.

Statement C: When using the phrase 'many a,' it is customary to use a singular noun, in this case 'eye', to complement it.

Statement D: The error lies in the use of the verb 'raging' instead of the noun 'rage' to form the adjective phrase 'all the rage' meaning something that is trending at the moment.

Thus, Option A is the correct answer.

7.

A. While learning cursive in school may seem redundant, it does account for good penmanship between those who learnt it well.

B. Envelopes embossed with wax seals enclosing within themselves letters in yellow pages will never go out of style.

C. Children should be inculcate with the habit of tidying up after themselves from a very early age.

D. Astonishing results are achieved when workplaces become open but unencumbered by cubicle walls.

E. All are correct.

Answer: Option – B

Solution:

Statement A: The error lies in the use of the preposition 'between' instead of the more appropriate 'amongst' to denote a quality attained by many. The preposition 'between' is used to indicate that something exists between two people, while 'among' is used to indicate that it exists among more than two.

Statement C: The error lies in the use of the wrong form of the verb 'inculcate' which needs

to be in its past participle form 'inculcated', to better complement the modal 'should be'.

Statement D: The error lies in the use of the contradictory conjunction 'but' to join complementary phrases 'open' and 'unencumbered by cubicle walls.' In the sentence, 'but' needs to be replaced by 'and' to be contextually correct.

Thus, Option B is the correct answer.

8.

A. It is not enough to give female employees maternity leaves if the company fails to provide them with social security and maternity benefits.

B. The peach cobbler made by grandma was always the highlight of the Thanksgiving dinners.

C. The stuffed turkey burned beyond recognizing, taking the poor swing beside the oven along with it.

D. Heavy snowfall caused the air services to Srinagar to be suspended and vehicular traffic on the Jammu–Srinagar highway to be shutting.

E. All are correct.

Answer: Option – B

Solution:

Statement A: The particle 'to' is always followed by the base form of the verb, in this case, 'give', to form an infinitive.

Statement C: The error lies in the use of the verb 'recognizing' instead of the noun 'recognition' to denote the condition of the turkey.

Statement D: The particle 'to' is always followed by the base form of the verb, in this case, 'shut', to form an infinitive. Thus, the use of the word 'shutting' is contextually incorrect.

Thus, option B is the correct answer.

9.

A. Her sudden suspension from school may be attributed to her irregular attendance and poor academic performance.

B. Reverse psychology may not be a clinically approved term, but it sure does help to explain why people want to do the things they have categorically been asked not to.

C. Jumping into muddy ditches during the monsoon is a favourite among children not old enough to consider the real possibility of the ditch being home to venomous snakes.

D. Visiting the pyramids at Egypt and unravelling the ancient spells surrounding them marked the highlight of Ron's vacation.

E. When the manager came over to the next candidate for the job, the candidate stood to shake the manager's hand.

Answer: Option – A

Solution:

Statement B: The error lies in the use of the adjective 'categorical' instead of the adverb 'categorically' to better qualify the following verb 'asked'.

Statement C: The error lies in the erroneous use of the adjective 'possible' instead of the noun 'possibility'. 'Possibility' is better qualified by the preceding adjective 'real' and fits the context of the sentence appropriately.

Statement D: The error lies in the use of the preposition 'at' to indicate the country 'Egypt'. When denoting countries, continents, etc, it is customary to use the preposition 'in'.

Statement E: The error is in the last part of the sentence, where instead of 'managers' it should be 'manager's' to indicate possession and convey whose hand did the candidate get up to shake with.

Thus, option A is the correct answer.

Direction(10-15): Four statements are given below at A, B, C, and D. There may be some errors in one of the given statements. Mark the incorrect statement as the answer. If all the statements are incorrect, mark option E, i.e., "All are incorrect" as the answer.

10.

A. The reason behind MAD was that if we can annihilate the Soviets or the Chinese and they, in turn, can annihilate us, then none of us will start a war.

B. If we can annihilate the Soviets or the Chinese and they, in turn, can annihilate us, then none of us will start a war, was the reason behind MAD.

C. None of us will start a war if we can annihilate the Soviets or the Chinese and they, in turn, can annihilate us, which was the reason behind MAD.

D. The reason that if we can annihilate the Soviets or the Chinese and they, in turn, can annihilate us, then none of us will start a war, was given by MAD.

E. All are incorrect.

Answer: Option – A

Solution: The error lies in the statement mentioned in option A. Here, the plural verb 'were' does not appear to agree with the singular subject 'reason'. The subject 'reason' is singular in its form whereas, the verb 'were' is usually used for plural subjects.

11.

A. California's genocide is one of the most heinous chapters in the state's troubled racial history, which also includes forced sterilizations of people of Mexican descent.

B. In the state's troubled racial history, California's genocide is one of the most heinous chapters, which also includes forced sterilizations of people of Mexican descent.

C. The genocide in California is one of the most heinous chapters in the state's troubled racial history, which also includes forced sterilizations of people of Mexican descent.

D. One of the most heinous chapters in the state's troubled racial history are California's genocide, which also include forced sterilizations of people of Mexican descent.

E. All are incorrect.

Answer: Option – D

Solution: The error lies in option D. There are two errors in this sentence. Firstly, the phrase "One of the" would be followed by the plural subjects (chapters), but the auxiliary verb would agree with "one". Thus, "are" must be replaced by "is". In the second clause, the verb "include" should be in the singular form (includes) since the subject here is "genocide", which is singular.

12.

A. Some theorists believe the early Roman Catholic Church may have chosen the same date for Christmas to supplant the pagan rituals of Mithra, though many Christian scholars

dispute this.

B. Though many Christian scholars dispute this, some theorists believe the early Roman Catholic Church may have chosen the same date for Christmas to supplant the pagan rituals of Mithra.

C. Roman Catholic Church may have choose the same date for Christmas to supplant pagan rituals of Mithra, some theorists believe, though many Christian scholars dispute this.

D. Though many Christian scholars dispute this, the early Roman Catholic Church may have chosen the same date for Christmas to supplant the pagan rituals of Mithra, which is what some theorists believe.

E. All are incorrect.

Answer: Option – C

Solution: The error lies in option C. "Have chosen" is a grammatically incorrect expression in the statement. To make the present perfect tense, auxiliary verbs like 'have' are used before past participles like 'selected.' To make the sentence valid, the tense of the verb 'choose' must be altered from simple past to past participle. As a result, option C is the proper response.

13.

A. When the Vandals claimed North Africa and began disrupting the empire's trade by prowling the Mediterranean as pirates in the fifth century, a further blow came.

B. A further blow came in the fifth century when the Vandals claimed North Africa and began disrupting the empire's trade by prowling the Mediterranean as pirates.

C. When the Vandals claimed North Africa in the fifth century and began disrupting the empire's trade by prowling the Mediterranean as pirates, a further blow came.

D. In the fifth century, a further blow came in when the Vandals claimed North Africa and began disrupting the empire's trade by prowling the Mediterranean as pirates.

E. All are incorrect.

Answer: Option – A

Solution: The use of the word 'really' after 'prowling' sounds incorrect. Though in the sentence the word is used as an adverb, it does

not logically and grammatically with 'prowling'. Thus, option A is the correct answer.

14.

- A. During the second half of the 1930s, Stalin instituted the Great Purge, a series of campaigns designed to rid the Communist Party, the military, and other parts of Soviet society of those he considered a threat.
- B. During the second half of the 1930s, a series of campaigns designed to get rid from the Communist Party, the military, and other parts of Soviet society from those he considered a threat, Stalin instituted the Great Purge.
- C. Stalin instituted the Great Purge, a series of campaigns designed to rid the Communist Party, the military, and other parts of Soviet society of those he considered a threat, during the second half of the 1930s.
- D. To rid the Communist Party, the military, and other parts of Soviet society of those he considered a threat, Stalin instituted the Great Purge during the second half of the 1930s.
- E. All are incorrect.

Answer: Option – B

Solution: The error lies in option B. Here, the use of the 'get rid of' has been made incorrectly. The error made in the statement in option B is the grammatical usage of 'get rid of' followed by from: "campaigns designed to get rid of the Communist Party, the military and other parts of Soviet society from those he considered a threat". The phrase "get rid of from" is grammatically wrong.

15.

- A. Unused, unloved and unprotected, the oak huts suffered rot and ruin, while some were destroyed by bombs during World War II, and many were later bulldozed in street-widening schemes.
- B. The oak huts suffered rot and ruin, while some were destroyed by bombs during World War II, many were later bulldozed in street-widening schemes, being unused, unloved, and unprotected.
- C. The oak huts suffered rot and ruin, being unused, unloved, and unprotected, while some were destroyed by bombs during World War II, and many were later bulldozed in street-widening schemes.

- D. Destroyed by bombs during World War II, unused, unloved, and unprotected, the oak huts suffered rot and ruin, while much were later bulldozed in street-widening schemes.
- E. All are incorrect.

Answer: Option – D

Solution: In option D, the use of the word 'much', with the 'oak huts', is not correct, since 'much' can be used along with only uncountable nouns. It should be replaced with 'many.' Thus, option D is correct.

1. Given below are five statements A, B, C, D, and E, which when arranged in the correct order, form a coherent and meaningful paragraph. Rearrange the statements in a proper sequence to form a meaningful paragraph, and then answer the questions that follow.

- a) As we try to get closer to those we connect online we get distant from the loved ones who are sitting in front of us
- b) Because the 'number of followers that we have on social media is unlike the few people who would truly support one in real life.
- c) Our connections with other people's hearts while connecting to a high-speed internet connection are growing weak.
- d) It is funny how a touch screen has made us lose touch with those who actually are here and care about us.
- e) Hopefully, we realize and accept reality and treat virtually as "virtual".

Which of the following can be the LAST statement after rearrangement?

- A. A
B. B
C. C
D. D
E. E

Answer: E

Solution:

The **correct order of rearrangement is CBADE**

The introductory statement for the paragraph shall be C which talks about the topic of the passage i.e. “the loss of personal connection in a world of high-speed internet”.

Sentence B should follow sentence C as it directly refers to the reason or adds information to what is said in the introductory sentence. B is the second statement

The third statement should be sentence A as it further adds information to the difference between online followers and real people
Sentence D completes the meaning of what is said in sentence A. So D should be the fourth statement after A.

E is about ending the given passage on a positive and hopeful note so undoubtedly it will be the last sentence in the order.

2. Which of the following will become the FOURTH statement in the rearranged series?

- A. A
- B. B
- C. C
- D. D
- E. E

Answer: D

Solution:

The correct order of rearrangement is CBADE

The introductory statement for the paragraph shall be C which talks about the topic of the passage i.e. “the loss of personal connection in a world of high-speed internet”.

Sentence B should follow sentence C as it directly refers to the reason or adds information to what is said in the introductory sentence. B is the second statement

The third statement should be sentence A as it further adds information to the difference between online followers and real people
Sentence D completes the meaning of what is said in sentence A. So D should be the fourth statement after A.

E is about ending the given passage on a positive and hopeful note so undoubtedly it will be the last sentence in the order.

3. Which of the following will become the THIRD statement in the rearranged series?

- A. A
- B. B
- C. C
- D. D
- E. E

Answer: A

Solution:

The correct order of rearrangement is CBADE.

The introductory statement for the paragraph shall be C which talks about the topic of the passage i.e. “the loss of personal connection in a world of high-speed internet”.

Sentence B should follow sentence C as it directly refers to the reason or adds information to what is said in the introductory sentence. B is the second statement

The third statement should be sentence A as it further adds information to the difference between online followers and real people
Sentence D completes the meaning of what is said in sentence A. So D should be the fourth statement after A.

E is about ending the given passage on a positive and hopeful note so undoubtedly it will be the last sentence in the order.

4. Which of the following will become the SECOND statement in the rearranged series?

- A. A
- B. B
- C. C
- D. D
- E. E

Answer: B

Solution:

The correct order of rearrangement is CBADE

The introductory statement for the paragraph shall be C which talks about the topic of the passage i.e. “the loss of personal connection in a world of high-speed internet”.

Sentence B should follow sentence C as it directly refers to the reason or adds information to what is said in the introductory sentence. B is the second statement

The third statement should be sentence A as it

further adds information to the difference between online followers and real people Sentence D completes the meaning of what is said in sentence A. So D should be the fourth statement after A.

E is about ending the given passage on a positive and hopeful note so undoubtedly it will be the last sentence in the order.

5. Which of the following will become the FIRST statement in the rearranged series?

- A. A
- B. B
- C. C
- D. D
- E. E

Answer: C

Solution:

The correct order of rearrangement is CBADE

The introductory statement for the paragraph shall be C which talks about the topic of the passage i.e. "the loss of personal connection in a world of high-speed internet".

Sentence B should follow sentence C as it directly refers to the reason or adds information to what is said in the introductory sentence. B is the second statement

The third statement should be sentence A as it further adds information to the difference between online followers and real people Sentence D completes the meaning of what is said in sentence A. So D should be the fourth statement after A.

E is about ending the given passage on a positive and hopeful note so undoubtedly it will be the last sentence in the order.

6. In the given question, a statement has been divided into five segments, each of which is denoted by (A), (B), (C), (D) and (E). Rearrange all the segments to form a coherent statement.

- A) approach consisting of eight focus areas
- B) adopted a mission-based
- C) for Climate Change encouraged all
- D) states to build their own plans and

E) the National Action Plan

What is the correct sequence of the given fragments?

- A. BDACE
- B. CDABE
- C. EBCDA
- D. ECDBA
- E. No rearrangement required

Answer: D

Solution:

The correct order of rearrangement is ECDBA.

The subject of the sentence is in fragment E, i.e. is 'the national action plan'.

E and C form a mandatory pair, as the purpose of this plan is mentioned in fragment C- 'for climate change' that encouraged.

Whom it encouraged is mentioned in D. So it comes in the 3rd place.

D ends in 'and' requiring another entity to match with 'plans' which is mentioned in B.

Also BA is a mandatory pair that makes A the last in the sequence.

7. In the given question, a statement has been divided into five segments, each of which is denoted by (A), (B), (C), (D) and (E). Rearrange all the segments to form a coherent statement.

- A) of the market economy network,
- B) is very much a part
- C) the medical profession in the country
- D) its gaping income disparities
- E) and its private-profit motivations

- A. BCDEA
- B. CBADE
- C. ABCDE
- D. DECAB
- E. BADEC

Answer: B

Solution:

The correct order of rearrangement is CBADE.

Segment C is the subject of the sentence i.e. "the medical profession".

B has the verb for “the medical profession” So it follows C.

BA is a mandatory pair that conveys the place where the subject belongs. A thus comes after B.

The pronoun its refer to the ‘market economy network’. So, D is the fourth fragment.

E starts with the conjunction and it should come after segment D to show it is an addition.

8. In the given question, a statement has been divided into five segments, each of which is denoted by (A), (B), (C), (D) and (E). Rearrange all the segments to form a coherent statement.

A) in the Kalahandi region

B) disaster like drought is

C) ecological degradation leading to

D) becoming more frequent leading to the ultimate collapse

E) of the traditional livelihood sources

- A. ACBDE
- B. CBADE
- C. ABCDE
- D. DECAB
- E. BADEC

Answer: A

Solution:

The correct order of rearrangement is ACBDE.

Segment A is the first fragment, as it is the independent fragment.

There is a cause-effect relation in operation (leading to). If ‘ecological degradation’ is a cause then it is logical that ‘drought’ is the effect. So, CB is the mandatory pair.

Drought becomes more frequent, then it will lead to the collapse of traditional livelihood. So, we can say that DE is the logical sequence.

9. In the given question, a statement has been divided into five segments, each of which is denoted by (A), (B), (C), (D) and (E). Rearrange all the segments to form a coherent statement.

A) social security stresses

B) while targeted, unconditional cash transfers

C) India’s approach to

D) are little used, and have been hardly evaluated

E) the provision of subsidised food and public works

- A. BCDEA
- B. CBADE
- C. CAEBD
- D. DECAB
- E. BADEC

Answer: C

Solution:

The correct order of rearrangement is CAEBD.

Segment C is the subject of the sentence. So it comes at the first position.

What India’s approach is concerned with is explained by segment A.

This approach thus ‘stresses’ on something.

This is best explained by segment E which talks about provision for subsidised food and public works.

Segment B which starts with the conjunction while should thus come in the fourth position indicating the contrast between ‘subsidised food and public works’ and ‘targeted, unconditional cash transfers’.

Thus, segment D comes in the fifth position.

10. In the given question, a statement has been divided into five segments, each of which is denoted by (A), (B), (C), (D) and (E). Rearrange all the segments to form a coherent statement.

A) on a surety bond of Rs 25,000 on Friday

B) Kashmir University lecturer Noor Muhammad Bhat,

C) who was arrested on charges of sedition

D) on December 9,

E) was granted bail by the Jammu and Kashmir High Court

- A. BCDEA
- B. CBADE
- C. ABCDE
- D. DACEB
- E. BADEC

Answer: A

Solution:

The correct order of rearrangement is BCDEA.

B comes first having the subject of the sentence i.e. Kashmir University lecturer Noor Muhammad Bhat.

Next is C talking about what happened to him.

D comes next as it has the date of the arrest i.e. December 9.

E will follow D as it refers to the current situation.

A comes at the end of the sentence referring to the amount of money.

11. In the given question, a statement has been divided into five segments, each of which is denoted by (A), (B), (C), (D) and (E). Rearrange all the segments to form a coherent statement.

- A) incompetence at the center
- B) where it is in power
- C) the popular political party
- D) and in the states
- E) is beset with allegations of corruption,

- A. BCDEA
- B. CEADB
- C. ABCDE
- D. DACEB
- E. BADEC

Answer: B

Solution:

The correct order of rearrangement is CEADB.

Segment C defines the subject of the sentence being a certain political party. It comes first.

C should be followed by segment E which states what the party is facing.

Since it is facing a negative situation, segment E should be followed by segment A which states another problem.

Since segment D starts with the conjunction and

it should come in the fourth position followed by the remaining segment B.

Directions (12-13): Given below are six statements A, B, C, D, E and F which when arranged in the correct order, form a coherent and meaningful paragraph.

Rearrange the statements in a proper sequence to form a meaningful paragraph and then answer the questions that follow.

- A) The subspecies, known as the Pyrenean ibex, then moved into the mountains of northern Iberia and southern France around 18,000 years ago.
- B) Less than a century later, the last of their descendants died – and then she was cloned, and then the clone died.
- C) Several species of ibex – wild mountain goats – lived across Europe, Asia, and Africa and coexisted with humans for a long time.
- D) For thousands of years, they thrived and grazed the rocky, scrub-dotted mountain pastures in abundance.
- E) By 1910 only 40 bucardos remained, sheltered in a national park in northern Spain.
- F) But their numbers dropped sharply in the 1800s.

12. Which of the following will be the fourth statement after rearrangement?

- A. A
- B. D
- C. B
- D. F
- E. E

Answer: D

Solution:

The correct sequence is CADFEB

The passage talks about an extinct species – Ibex. C would be the first sentence, that tells about the subject of the passage.

Then would come A which highlights how the Ibex migrated to France. So, A is the second statement

Then D would follow as it further highlights how was their life in France where they thrived. Thus D is the third statement.

Later, their numbers started dipping which is

mentioned in F. So, F becomes the Fourth Statement.

F and E will form a mandatory pair as the years are mentioned. So E will follow F as the fifth statement.

The last statement would be B showing finally how the last descendant died, which was cloned at one point in time but she also died.

13. Which of the following will be the first statement after rearrangement?

- A. A
- B. C
- C. B
- D. F
- E. E

Answer: B

Solution:

The correct sequence is CADFEB

The passage talks about an extinct species – Ibex. C would be the first sentence, that tells about the subject of the passage.

Then would come A which highlights how the Ibex migrated to France. So, A is the second statement

Then D would follow as it further highlights how was their life in France where they thrived. Thus D is the third statement.

Later, their numbers started dipping which is mentioned in F. So, F becomes the Fourth Statement.

F and E will form a mandatory pair as the years are mentioned. So E will follow F as the fifth statement.

The last statement would be B showing finally how the last descendant died, which was cloned at one point in time but she also died.

14. Which of the following will be the third statement after rearrangement?

- A. A
- B. D
- C. B
- D. F
- E. E

Answer: B

Solution:

The correct sequence is CADFEB

The passage talks about an extinct species – Ibex. C would be the first sentence, that tells about the subject of the passage.

Then would come A which highlights how the Ibex migrated to France. So, A is the second statement

Then D would follow as it further highlights how was their life in France where they thrived. Thus D is the third statement.

Later, their numbers started dipping which is mentioned in F. So, F becomes the Fourth Statement.

F and E will form a mandatory pair as the years are mentioned. So E will follow F as the fifth statement.

The last statement would be B showing finally how the last descendant died, which was cloned at one point in time but she also died.

15. Which of the following will be the sixth statement after rearrangement?

- A. A
- B. D
- C. B
- D. F
- E. E

Answer: C

Solution:

The correct sequence is CADFEB

The passage talks about an extinct species – Ibex. C would be the first sentence, that tells about the subject of the passage.

Then would come A which highlights how the Ibex migrated to France. So, A is the second statement

Then D would follow as it further highlights how was their life in France where they thrived. Thus D is the third statement.

Later, their numbers started dipping which is mentioned in F. So, F becomes the Fourth Statement.

F and E will form a mandatory pair as the years are mentioned. So E will follow F as the fifth statement.

The last (sixth) statement would be B showing

finally how the last descendant died, which was cloned at one point in time but she also died.

16. Which of the following will be the second statement after rearrangement?

- A. A
- B. D
- C. B
- D. F
- E. E

Answer: A

The correct sequence is CADFEB

The passage talks about an extinct species – Ibex. C would be the first sentence, that tells about the subject of the passage.

Then would come A which highlights how the Ibex migrated to France. So, A is the second statement

Then D would follow as it further highlights how was their life in France where they thrived. Thus D is the third statement.

Later, their numbers started dipping which is mentioned in F. So, F becomes the Fourth Statement.

F and E will form a mandatory pair as the years are mentioned. So E will follow F as the fifth statement.

The last statement would be B showing finally how the last descendant died, which was cloned at one point in time but she also died.

17. In the given question, a statement has been divided into five segments, each of which is denoted by (A), (B), (C), (D) and (E). Rearrange all the segments to form a coherent statement.

- A) recently covered substantial tracts of its surface.
- B) became even more interesting with
- C) largest dwarf planet, just
- D) Pluto, the Solar System's
- E) a report that icy lava flows have

What is the correct sequence of the given sentences?

- A. BDACE
- B. DCABE

- C. DCBEA
- D. ECDBA
- E. No rearrangement required

Answer: C

Solution:

The correct sequence is DCBEA.

Segment D is the subject of the sentence. So it comes at the first position.

C will come next as it answers the question "solar system's what?".

B will follow C having the verb that the adverb "just" modifies.

Next will come E as it has details of what the planet attracted interest with.

And finally, A comes in the fifth position.

18. In the given question, a statement has been divided into five segments, each of which is denoted by (A), (B), (C), (D) and (E). Rearrange all the segments to form a coherent statement.

- A) growing population
- B) ever-expanding workforce
- C) to its
- D) which contributes
- E) India has a vast

- A. EBCAD
- B. BAECD
- C. CBADE
- D. EADCB
- E. ABCED

Answer: D

Solution:

The correct sequence is EADCB.

E should be the first as it introduces the sentence's subject, i.e. India.

A comes next with a noun that can be modified with the adjective 'vast' at the end of E.

D then tells what the vast population does.

'Contributes' should be followed by the preposition 'to', which is present in C.

Finally, B talks about the workforce to which the population of India contributes.

19. In the given question, a statement has been divided into five segments, each of which is denoted by (A), (B), (C), (D) and (E). Rearrange all the segments to form a coherent statement.

- A) process of using
 - B) to alter the genetic
 - C) makeup of an organism
 - D) genetic engineering is the
 - E) recombinant DNA (rDNA) technology
- A. ABEDC
 - B. DAEBC
 - C. DCBAE
 - D. ABDEC
 - E. BADEC

Answer: B

Solution:

The correct sequence is DAEBC.

D is the first segment as it introduces the sentence's subject, i.e. genetic engineering. Next will come A telling what genetic engineering is i.e., a process. E further tells what is used in the process of genetic engineering. B mentions why genetic engineering is used. Finally, C concludes the sentence.

20. In the given question, a statement has been divided into five segments, each of which is denoted by (A), (B), (C), (D) and (E). Rearrange all the segments to form a coherent statement.

- A) spacecraft operation
 - B) of autonomous
 - C) evaluate the advantages
 - D) engineers to
 - E) they will allow
- A. EDCBA
 - B. ABCED
 - C. ABCDE

- D. EABCD
- E. CDBAE

Answer: A

Solution:

The correct sequence is EDCBA.

E comes first as it introduces the subject of the sentence.

D should follow E since it mentions the object who will be allowed i.e., the engineers.

C should follow next as it contains an infinitive to be used after 'to' in D.

BA is a mandatory pair giving us further mention of the noun whose advantages are talked about.

I. It is crucial for the RBI to _____ that the discipline in the banking organizations does not _____.

- a) notice, weak
- b) maintain, exist
- c) ensure, slacken
- d) order, wrecked
- e) None of the above

Answer – Option – (c) is correct, the meaning of each of the given words is – 'ensure' must come at the first blank as it is RBI which is ensuring something about banking, and the next word should be 'slacken' as slacken means weaken and this is what RBI is trying to avoid.

notice – pay attention, weak – fragile, liable to break; maintain – to continue something at the same level, exist – to be real; ensure – to make sure that something happens, slacken – reduce/weaken; wrecked – badly damaged.

Based on the above words, option-(c) gives the perfect meaning to the sentence.

II. The _____ of NPAs have been increasing, but this measure alone cannot be a _____ solution to mounting liquidity distress.

- a) demand, efficient
- b) areas, one time
- c) instances, permanent
- d) request, sure
- e) None of the above

Answer – Option – (c) is correct, the meaning of each of the given words is –

Since the context is cases of NPAs are increasing so for that the most appropriate word should be 'instances'. Thus 'instances and permanent' is the correct word to choose. demand – a strong request/order, efficient – working well accurately;

instances – examples/cases, permanent – lasting forever.

Based on the above words, option-(c) gives the perfect meaning to the sentence.

III. There has been _____ interest among mutual fund investors, thanks to the good performance of the actively managed large-cap equity funds.

- a) increased
- b) decreased
- c) fragment
- d) determined
- e) None of the above

Answer – Option – (a) is correct.

Since 'good performance' is talked about, thus, for that 'increased' which is a positive word must be chosen.

Based on the above words, option-(a) gives the perfect meaning to the sentence ('fragment' means 'small pieces of something' & 'determined' means 'firmly decided').

IV. IIT Delhi has been ranked one _____ the best Indian _____ in the QS World University Rankings.

- a) among, university
- b) of, universities
- c) in, universities
- d) at, university
- e) None of the above

Answer – Option – (b) is correct. As per the given options, "one of the universities" is the correct option because "one of the" phrase is used to define something from a group and we always use plural nouns with it.

V. The Delhi Government _____ understand the severity of the polluted water in Yamuna because the recent steps have not shown any _____ impact at the environmental level.

- a) would, support
- b) doesn't, negative
- c) has, crucial

- d) should, remarkable
- e) None of the above

Answer – Option – (d) is correct, as it gives the perfect meaning to the sentence (**remarkable – unusual and worth noticing & 'should' is used to show some obligation or give recommendation**). 'Would' can't be used because it is used to make polite requests or in hypothetical situations. Here, it is the responsibility of the Delhi Government that it should take some sincere steps for the polluted water in Yamuna.

VI. All the _____ functions related to the corporates continue to be _____ by the Ministry of

Corporate Affairs.

- a) governance, controlled
- b) important, overlooked
- c) good, envisioned
- d) exploratory, facilitated
- e) None of the above

Answer – Option – (a) is correct, the

meanings of the given words are – Since the 'Ministry' is talked about thus, the context is of governance. thus 'governance and 'controlled' must be chosen.

governance – related to government rules/actions; overlook – fail to see something; envision – to imagine as a future possibility; exploratory – done to find out something, facilitate – to make something possible.

Based on the above words, option-(a) gives the perfect meaning to the sentence.

VII. The Human Rights Commission is _____ as it lacks the

necessary provision in the law to penalize those guilty of the violation of human rights.

- a) hale and hearty
- b) all bark and no bite
- c) all Greek to me
- d) a low hanging fruit
- e) None of the above

Answer – Option – (b) is correct, the meaning of each of the given words is –

hale and hearty – healthy and strong; all bark and no bite – full of talk but low on the action; all Greek to me – difficult to understand; a low hanging fruit – easily achievable.

Since, the context of the sentence is that the

Human Rights Commission is not able to take proper and stringent measures against those guilty. Based on the above words, option-(b) gives the perfect meaning to the sentence.

VIII. The last evening was _____ fun _____ how long it lasted.

- a) neither, nor
- b) really, and
- c) very much, but
- d) so much, no matter
- e) None of the above

Answer – Option – (d) is correct, based on the given options ('no matter' means 'irrespective of/'regardless of'). 'fun' is a noun which requires a determiner before it thus option D which has 'much' as a determiner in it fits here correctly.

Direction (1-20): In the following questions, the sentence given with blank/blanks is to be filled in with appropriate word/words. Select the correct alternative out of the five and indicate it by selecting the appropriate option.

1. Defense Research and Development Organisation would _____ the investigation into the Hyundai i20 fire cars that _____ in Kolkata.

- (a) Lead, occurred
- (b) Ancient, assumed
- (c) Enquired, controlled
- (d) Secondary, rejected
- (e) Tumid, care

Explanation: **option – (a) is correct.** Since the context of the sentence is 'the task of the DRDO to conduct the investigation', It fits perfectly in the sentence. 'Tumid' means pompous or bombastic.

2. The State administration has _____ to recover damages of _____ public property from protestors of Agneepath Scheme.

- (a) Decided, demolished
- (b) Advised, solved
- (c) Committed, soared
- (d) Declared, mantled
- (e) Used, excluded

Explanation: **Option – (a) is correct.** Other words have different meanings and do not fit in the given sentence contextually or grammatically.

3. Kobian is _____ in the business of manufacturing and distributing computer peripherals _____ motherboard, monitor, power product, computer casing, etc.

- (a) Worked, discovering
- (b) Engaged, including
- (c) Conserved, using
- (d) Suspected, demonstrating
- (e) Associated, keeping

Explanation: Based on the above sentence, **option – (b) is correct** as it gives the perfect meaning to the sentence. 'Engaged' – busy in doing something, 'conserved' – avoided wasting something; 'suspected' – doubted, 'demonstrating' – showing something clearly by giving proof.

4. Angelina Jolie _____ her own brand which _____ a wide range of home decor items with elements of foreign heritage.

- (a) Staged, adopts
- (b) Launched, features
- (c) Opportunity, holds
- (d) Moment, consists
- (e) Severity, held

Explanation: The word 'launched' means 'started' and 'feature' means 'to include somebody/something as an important part,' thus as per the given sentence, **option – (b) is correct** as it provides the perfect meaning to the sentence.

5. In a dynamic and _____ unstructured trade environment, sustainability and innovation are being _____ demanded of the top management companies.

- (a) Progressively, increasingly
- (b) Highly, extremely
- (c) Increasingly, moderately
- (d) Excessively, steadily
- (e) Detriment, losing

Explanation: **Option – (a) is correct.** Here, 'Progressively' (means: 'steadily, a little at a time') and since innovation is strong in demand so for the context, 'increasingly' are the words that fit perfectly and contextually in the given sentence.

6. Capricorns are _____ in nature, but are loyal and _____ of their loved ones.

- (a) Reserved, sympathetic
- (b) Assisting, visualized
- (c) Disturbances, associated
- (d) Nature, issued
- (e) Consonance, contract

Explanation: 'Reserved' means 'those who keep their feelings hidden' and 'sympathetic' means 'understanding other people's feelings.' Thus, **option-(a) is correct** since all the given words do not fit perfectly in the respective blanks.

7. Organic Delusional Syndrome or ODS is a term used for _____ to a mental disorder caused by intrinsic disease that _____ persistent or recurrent irrational beliefs.

- (a) Referring, includes
- (b) Editing, states
- (c) Determining, dispute
- (d) Ratifications, issues
- (e) Chaos, consents

Explanation: Here, **option – (a) is correct** as it fits perfectly. In the given context, ODS is a disease that includes a lot of symptoms, and whenever we use some technical term, it must refer to something, thus 'refer' is the correct word. Since symptoms also contain a lot of things, thus 'includes' is the best word to choose.

8. The Human Rights Council had _____ a draft of people rights charter with the Ministry and it was _____ at the 5th meeting of the National Human Rights Commission.

- (a) Shared, discussed
- (b) Determined, earned
- (c) Attracted, enquired
- (d) Explained, context
- (e) Proof, reality

Explanation: Here, **option – (a) is correct.** We are talking about a draft of the charter of rights of the people which was shared with the Ministry by the Human Rights Council due to the ongoing situation in the country and that draft was discussed in the meeting of the stakeholders.

9. As soon as Ajinkya Rahane _____ the catch to reduce West Indies to three down, Kohli _____ with a fist pump before joining the rest of his teammates.

- (a) Grabbed, celebrated
- (b) Launching, visualized
- (c) Rejecting, reported
- (d) Retiring, exploited
- (e) Leave, consequence

Explanation: **Option – (a) is correct,** the given sentence says that Kohli showed a gesture of triumph when Rahane caught the ball.

10. India re-established a _____ presence in Syria, from where it _____ all its officials following the terrorist takeover last year.

- (a) Diplomatic, withdrew
- (b) Benefits, perception
- (c) Ramifications, chance
- (d) Beginning, problem
- (e) Concurrence, solution

Explanation: **Option – (a) is correct.** Here, 'diplomatic' means 'connected with diplomacy,' 'withdrew' means 'to remove something or take something away;' 'ramification' means 'one of the many complicated or unexpected results of an action or decision;' 'concurrence' means 'two or more things happening simultaneously.'

11. Daily Covid cases have _____ up over the past few months and the daily positivity rate is also _____ as compared to the last month.

- (a) Realized, less
- (b) Spiked, higher
- (c) Mutilated, excellent
- (d) Resourced, extreme
- (e) Dissented, good

Explanation: **Option – (b) is correct,** the given statement says that the covid cases have increased sharply in the last few months.

Mutilation means the action of damaging something.

12. The idea _____ is radical because it foresees the re-evaluation of government and governance and _____ federalism.

- (a) Conceived, deepens
- (b) Perceived, lightens
- (c) Born, jokes
- (d) Conceptualized, satire
- (e) Halt, spread

Explanation: Option – (a) is correct. However, 'satire' – spoof; 'conceptualized' – formed a concept or idea of (something) and 'perceived' – noticed or realized something do not make sense. 'Conceived' means 'thought of a new idea or plan,' 'deepens' means 'to become more strongly felt or experienced.'

13. The political crisis being _____ by the West Bengal government _____ after the rebel party claimed the support of 55 MLAs.

- (a) Sorted, moved
- (b) Faced, intensified
- (c) Required, ran
- (d) Wanted, advanced
- (e) Reconsidered, clause

Explanation: Option – (b) is correct. 'Intensified' means 'deepened.' The correct word is sought after which means something in demand. The second word also fits in well here and conveys the meaning that the movement has been less than expected.

14. Science has _____ transformed lives but it is high time that the modern scientific developments stop turning _____ to its users.

- (a) Suddenly, exclusive
- (b) Consistently, a blind eye
- (c) Brokenly, included
- (d) Smooth, excluded
- (e) Prudent, brief

Explanation: Option – (b) is correct. 'Turning a blind eye' means 'pretending not to notice.' Here, 'Suddenly' and 'exclusive' do not fit. 'Brokenly' is the opposite of what is needed. So, 'consistently' (smoothly and continuously) and 'comprehensive' are the only words that fit in.

'Prudent' means sensible and careful when making judgements.

15. The UP police team has _____ voice samples of Ram Mandir priest after a formal complaint was _____ against him for delivering a hate speech.

- (a) Withdrawn, vague
- (b) Given, disowned
- (c) Collected, registered
- (d) Get, constricted
- (e) Terse, convicted

Explanation: Option – (c) is correct. Here, other options do not fit in the given statement ('constricted': 'made something tighter, narrower or less,' 'vague': 'not clear, definite,' 'terse': 'said in few words').

16. The India Meteorological Department has _____ a cloudy sky with light rain and _____ wind.

- (a) Worked, care
- (b) Predicted, gusty
- (c) Assumed, shame
- (d) Looked, enthusiasm
- (e) Dealt, victim

Explanation: Option – (b) is correct. 'Predicted' means 'having said something that would happen in the future' & 'Gusty' means 'characterized by or blowing in gusts.' In option-(d), both the words are opposite of what is needed in the respective blanks; option-(a) – energy does not fit in both the statements; option-(c) is irrelevant to the context and incorrect.

17. Instagram has updated its privacy _____ to _____ ads of obnoxious content for protecting teenagers.

- (a) Rules, prevent
- (b) Criteria, protect
- (c) Interface, allow
- (d) Policy, restrict
- (e) Division, gather

Explanation: Option – (d) is correct. In the given options, 'policy' and 'restrict' are the only options that fit contextually. Instagram does not have any rules for advertising but the policy or criteria. And these policies and criteria are to

prevent ads from displaying something unethical.

18. All five _____ judges seconded the right to carry arms in public, while two liberal judges didn't _____ in favour.

- (a) Decision, regulate
- (b) Order, pass
- (c) Involvement, issue
- (d) Conservative, vote
- (e) Mobilize, clear

Explanation: Option – (d) is correct. 'Conservative' ('not liking change; traditional') and 'vote' fits perfectly in the sentence. Any other word does not fit in the sentence ('Indictment' – 'a written paper that officially accuses somebody of a crime').

19. In the majority _____ written by the bench of Justice Tyagi, the court declared it as a _____ of the Fourth Amendment of the Indian Constitution.

- (a) Condemn, organise
- (b) Judgement, defence
- (c) End, achieve
- (d) Reverence, halt
- (e) Terrible, modest

Explanation: Option – (b) is correct, 'judgement' (an opinion formed after carefully considering the provided information) & 'defence' (something that protects somebody/something from something) fit perfectly in the sentence. 'Condemn' – 'to say strongly that you think somebody/something is very bad or wrong,' 'Reverence' – 'a feeling of great respect,' 'Halt' – 'a shortstop in some activity, movement or growth' and 'Modest' – 'not very large' do not fit in the sentence.

20. The Canadian government has _____ a strategy that is particularly _____ on attracting more and more foreign investment.

- (a) Resulted, struggled
- (b) Launched, focussed
- (c) Resulted, centre
- (d) Reacted, disputed
- (e) Separated, collected

Explanation: Option – (b) is correct; because other options do not fit contextually in the sentence.

Directions (1-11): In the following passage some words have been omitted. Select the most appropriate option for each blank.

India ranks 3rd1..... renewable energy country attractive index in 2021. The country has set an ambitious target to2..... a capacity of 175 GW worth of renewable energy3... the end of 2022, which4..... to 500 GW by 2030. This is the world's largest expansion plan in5..... energy.

India's6..... renewable energy capacity has increased 286% in the7..... 7.5 years and stands at more than 151.4 Giga Watts (including large Hydro), which is about 39 percent of the8..... total capacity (as of 31st December 2021). The installed solar energy9.... has increased by 17 times in the10..... 7 years, and stands at 49.5 GW. The Renewable energy ...11.... capacity (including large hydro) has increased from 76.37 GW in March 2014 to 151.4 GW in December 2021, i.e. an increase of around 98%. India has achieved its NDC target with a total non-fossil-based installed energy capacity of 158.17 GW which is 40.2% of the total installed electricity capacity.

Que 1. (a) in (b) on (c) for (d) between (e) none of the above

Ans: (a)

Explanation: 'In' is the appropriate preposition to be used. In means expressing the situation of something that is or appears to be enclosed or surrounded by something else. So it is the correct word to be used.

Que 2. (a) obtain (b) achieve (c) make (d) create (e) build

Ans: (b)

Explanation: Both obtain and achieve are verbs and the difference between them is that obtain is to get hold of; to gain possession of, to procure; to acquire, in any way while achieve is to succeed in something. Since the context is of achieving something thus option b is the correct answer.

Que 3. (a) by (b) at (c) in (d) near (e) collecting

Ans: (a)

Explanation: The different meanings of prepositions are :

at – for telling the exact time.

on – for stating exact dates and days.

in – for a longer duration. So the correct answer to be used is 'by'.

by- for indicating a deadline or the end of a particular time period.

Since the end of a particular time period is to be indicated thus for that 'by' should be used.

Que 4. (a) just (b) hardly (c) forms (d) expands (e) grows

Ans: (d)

Explanation: The correct verb to be used here is 'expands'. Grow means to become bigger while expand is to change (something) from a smaller form and/or size to a larger one. So as per the statement expands looks more suitable verb to be used as it makes the statement more meaningful.

Que 5. (a) tide (b) solar (c) wind (d) non-renewable (e) renewable

Ans: (e)

Explanation: According to the paragraph the word renewable is the most appropriate word to be used.

6. (a) installed (b) linked (c) built (d) about (e) at

Ans: (a)

Explanation: As per the passage the verb

installed suits the statement more because 'built' is used for making something physically, i.e. tangible.

7. (a) would (b) before (c) last (d) past (e) previous

Ans: (c)

Explanation: As adjectives the difference between last and past is that last is final, ultimate, coming after all others of its kind while past is having already happened; in the past; finished. So the most appropriate word to be used is 'last'

8. (a) sell (b) country's (c) it's (d) (e) use

Ans: (b)

Explanation: The word "it's" can be used but "country's" is more appropriate than any other word because the total capacity of the country is the context of the passage.

9. (a) capacity (b) ability (c) potential (d) volume (e) amplitude

Ans: (a)

Explanation: The meaning of capacity implies potential, whereas ability implies possibility. Here the statement wants to imply the word potential, so the word capacity is appropriate to be used.

Que 10. (a) prior (b) latest (c) final (d) last (e) rear

Ans: (d)

Explanation: Again here the usage of last is as an adjective so option d is correct.

Que 11. (a) inducted (b) invested (c) fix (d) fit (e) installed

Ans: (e)

Explanation: As per the passage the verb installed is the most suitable word for this place to be used.

Fill in the Blanks with correct option:

Q 1. Despite studying for hours, _____.
a. he still failed the test
b. he got an A+ on the exam
c. he decided to skip the test
d. he didn't feel confident enough to take the test
e. he aced the test with flying colors

Answer: a. he still failed the test

Q 2. She arrived at the airport _____.
a. before the flight had landed
b. after the flight had left
c. just in time to catch her flight
d. without her luggage
e. with a delay of several hours

Answer: c. just in time to catch her flight

Q 3. The teacher asked the students to _____.
a. memorize the entire textbook
b. complete the assignment by tomorrow
c. skip the next class
d. write a book report on their favorite movie
e. quit the class

Answer: b. complete the assignment by tomorrow

Q 4. The new restaurant in town _____.
a. has already become very popular
b. is struggling to attract customers
c. serves terrible food
d. doesn't have any vegetarian options
e. has been shut down by the health department

Answer: a. has already become very popular

Q 5. He couldn't decide which shirt to wear to the party, _____.
a. so he wore them all
b. so he asked his mom to choose for him
c. so he didn't go to the party
d. so he flipped a coin
e. so he ended up wearing a t-shirt and jeans

Answer: d. so he flipped a coin

Q 6. The company's profits _____.
a. have been steadily increasing
b. have been steadily decreasing
c. have remained the same for years
d. have been affected by the pandemic
e. have never been disclosed to the public

Answer: a. have been steadily increasing

Q 7. She walked into the room _____.
a. with a big smile on her face
b. with tears in her eyes
c. carrying a heavy backpack
d. wearing a hat and sunglasses
e. yelling and screaming

Answer: b. with tears in her eyes

Q 8. The concert was cancelled _____.
a. due to bad weather
b. because the band missed their flight
c. because the tickets sold out too quickly
d. because of a technical issue
e. because the venue was too small

Answer: a. due to bad weather

Q 9. He didn't like the movie _____.
a. because it was too long
b. because it was too short
c. because it had a happy ending
d. because it had a sad ending
e. because it was a comedy

Answer: a. because it was too long

Q 10. She was able to finish the marathon _____.
a. despite the hot weather
b. because she cheated
c. because she got a ride in a car
d. because she was injured
e. because she gave up halfway through

Answer: a. despite the hot weather

Sample Questions on Paragraph Completion

Directions (Q 11-15)Choose the correct option to complete the paragraph:

Q 11. This seems even more crucial today given the lack of boundary between home and the outside world. When your authors were growing up, the world beyond their local community only came through the newspapers, radio, and television, with access to the latter two time-limited. Now, with mobile phones, iPads, and other devices, there are no boundaries and few time limits.

_____.
i) The world, for good and bad, is fully accessible, and the primacy of the messages delivered at home is under more challenge.

- ii) This act of rebellion changed the course of Harry's life, enabling him to get an education and do something other than walking a predetermined path.
- iii) Like Ellen, Harry was also subject to a prophecy.
- iv) Of our interviewees, Ellen was the one who seemed to have been chosen by destiny as a child.
- v) None of the above.

Answer: Option- (i) is correct, it suits the meaning and context of the paragraph.

Q 12. Beyond talking, there is also the question of what is modelled at home. With the rapid growth of the number of women in the workforce and the lessening of the number of women who are continuously at home full-time, many of us would intuitively assume that domestic duties are now more equitably shared.

_. The peak difference occurs in the age range of 35 to 44 years old, a time when families may need to look after children and spend time caring for ageing parents.

i) Given how grim much of the rest of Ellen's childhood story is, it is a relief to know there was also some fun and humour.

ii) As well as being formally briefed about the team working, every day she overheard something new and intriguing.

iii) But the statistics show that there is still quite some way to go. A time-use study conducted in the United States in 2018 reveals that, on average, women spend two hours a day more than men on unpaid house and care work.

iv) Partly, it has happened because books and articles on women have caught our eyes.

v) None of the above.

Answer: Option- (iii) is correct, it suits the meaning and context of the paragraph.

Q 13. At this stage of life, women are performing 8.8 hours a day of free work, while

men are contributing 5.2 hours. Even when men and women both work full time, there is a 22 per cent difference in the time devoted to unpaid domestic and caring work. A look at who manages healthcare needs at home also shows substantial differences.

_. When a child is too unwell to go to school, 40 per cent of mothers indicate that they are the adult who takes time off work to look after them, whereas only 3 per cent of fathers say that they shoulder that responsibility.

i) Informing these best guesses were two sources of information: our own life experiences and our understanding of the academic studies about women's leadership.

ii) Hypothesis might seem like an unusual word to use, but it had been on our lips since we first began to discuss writing this book.

iii) Our shared starting point was a set of best guesses about what might explain the numerical lack of women leaders and the ways we observed that they were treated differently from men.

iv) Around 80 per cent of mothers say that they are the parent who will take children to medical appointments, and over 75 per cent say that they do the follow-up, like ensuring that medication is taken.

v) None of the above.

Answer: Option- (iv) is correct, it suits the meaning and context of the paragraph.

Q 14. It might be a hard message to absorb for fathers who are not currently regularly wielding a mop, washing the dishes or staying home to look after a sick child, but at-home modelling about sharing domestic duties is another aspect of creating an enabling, non-stereotyped environment.

_. Research has shown that, when asked what they want to be when they grow up, girls were less likely to confine their answers to stereotypically female occupations if they had a dad who not only said he believed in a more

equal distribution of domestic labour but did more tasks at home.

ii) A striking feature of Joyce's recitation of her life story is the absence of references to her mother.

iii) Harry reminds us, though, that even in families where girls are nurtured and urged to aim high, poverty can flatten everything.

iv) Notably, this spirit of ambition for her was also in her grandmother.

v) None of the above.

Answer: Option- (i) is correct, it suits the meaning and context of the paragraph.

Q

15. _____

_____. A family that creates the kind of free-from-gender-limits environment our women leaders grew up in, will be empowering her to be a leader.

i) This was a decision with formidable ramifications. In her ethnic group, bearing the name of her grandmother is more than symbolic.

ii) Consequently, her grandmother's will for Joyce to become something else, to have a different life, was strong.

iii) The ideas were suggested by Joyce, many of these things did not happen.

iv) 'You go girl' is a proven hypothesis and a real lesson for the parents and other relatives of young girls.

v) None of the above.

Answer: Option- (iv) is correct, it suits the meaning and context of the paragraph.

Directions (Q.1-5) In the following Sentence completion questions, the first and sixth sentences of a passage are already provided. The middle four sentences have been removed and shuffled up; they are labeled P, Q, R and S. Rearrange these four sentences in the correct order.

Q 1. Order the following sentences to form a meaningful paragraph

S1: The sun was setting, casting a warm orange glow across the sky.

P: The trees rustled gently in the breeze, creating a soothing sound.

Q: Birds flew overhead, their wings silhouetted against the sunset.

R: The scent of flowers wafted through the air, carried by the wind.

S: People walked by, enjoying the peacefulness of the evening.

S6: The scene was like a painting, a perfect moment frozen in time.

Answer: The proper sequence is RQPS.

Q 2. Order the following sentences to form a meaningful paragraph

S1: The museum was filled with ancient artifacts from around the world.

P: There were statues from Egypt, pottery from China, and armor from Europe.

Q: Many of the items were thousands of years old, but they were still remarkably well-preserved.

R: Visitors marveled at the intricacy of the designs and the skill of the craftsmen who created them.

S: Some items were so delicate that they could only be displayed in special cases with controlled lighting.

S6: Despite the crowds, the museum was quiet and peaceful.

Answer: The proper sequence is PQRS.

Q 3. Order the following sentences to form a meaningful paragraph

S1: The dog barked loudly, waking up everyone in the house.

P: The cat hissed and ran away to hide under the bed.

Q: The owner scolded the dog, telling him to be quiet.

R: The dog wagged its tail, happy to have done

its job of alerting its family to a possible threat.

S: The owner checked outside and found that there was nothing to worry about.

S6: Eventually, everyone went back to sleep, but the dog stayed awake, watching over its family.

Answer: The proper sequence is PQRS.

Q 4. Order the following sentences to form a meaningful paragraph

S1: The restaurant was known for its delicious seafood dishes.

P: The chef was passionate about using fresh, local ingredients in all of his dishes.

Q: The menu featured a variety of fish, shrimp, and lobster dishes.

R: The waitstaff were friendly and knowledgeable about the menu.

S: The restaurant was decorated with nautical-themed artwork and accents.

S6: Diners could enjoy their meals while looking out at the ocean view from the restaurant's windows.

Answer: The proper sequence is PQRS.

Q 5. Order the following sentences to form a meaningful paragraph

S1: The athlete trained hard for months to prepare for the competition.

P: She woke up early every morning to run and lift weights.

Q: She hired a coach to help her improve her technique and strategy.

R: She studied the competition and analyzed their strengths and weaknesses.

S: She visualized herself crossing the finish line first, feeling the thrill of victory.

S6: On the day of the competition, she felt confident and focused, ready to give it her all.

Answer: The proper sequence is PQRS.

Directions (1-10): Following are the questions having the group of words. You have to choose the correctly spelt word.

Question 1.

- a) Millennium
- b) Millinium
- c) Milennium
- d) Millenium
- e) Mllemum

Answer: Option a

The correct spelling from the group of words is the **millennium**. The meaning of the word is a period of 1000 years.

Question 2.

- a) Hierarchy
- b) Hieraarchy
- c) Hieriararchy
- d) Hierache
- e) Herarchy

Answer: Option a

The correct spelling from the group of words is **hierarchy**. The meaning of the word is that has many levels from the lowest to the highest.

Question 3.

- a) Atheist
- b) Athest
- c) Athist
- d) Atheit
- e) Aheist

Answer: Option a

The correct spelling for the word is **atheist**. Someone who does not believe in gods is an atheist.

Question 4.

- a) Priveledge
- b) Privilidge
- c) Privilege
- d) priviledge
- e) Privlege

Answer: Option c

The correct spelling for the word is **privilege**. The meaning of this word is a special right or advantage that only one person or group has.

Question 5.

- a) Playrite
- b) Playright
- c) Playwrite
- d) Playwright
- e) Plaright

Answer: Option d

The correct spelling for the word is **playwright**. The meaning of the word is a person who writes plays for the theatre, television or radio.

Question 6.

- a) Exaggearate
- b) Exaggerate
- c) Exagjerate
- d) Exajerate
- e) Exajjerate

Answer: Option b

The correct spelling for the word is **exaggerate**. The meaning of the word is to make someone or something larger or smaller or nothing.

Question 7.

- a) Compitend
- b) Competent
- c) Compitent
- d) Compentent
- e) Comptent

Answer: Option b

The correct spelling for the word is **Competent**. The meaning of the word is having the skill or ability to do something.

Question 8.

- a) Inconvenice
- b) Inconvenience
- c) Inconvinence
- d) Inconvenince
- e) None of the above

Answer: Option b

The correct spelling for the word is **inconvenience**. The meaning of the word is trouble or difficulty.

Question 9.

- a) Enterpeneur
- b) Entrepreneur
- c) Entreprneeur
- d) Enterpeneur
- e) Entreprenuer

Answer: Option b

The correct spelling for the word is **entrepreneur**. The meaning of the word is a person who makes money by starting or running a business.

Question 10.

- a) Acquatance
- b) Acquaintence
- c) Acquaintance
- d) Acquaintance
- e) Aquaintaince

Answer: Option c

The correct spelling for the word is **Acquaintance**. The meaning of the word is person that you know is not a close friend.

Directions (11-20) : Here in the following Questions group of words is given. We have to pick the correctly spelt word

Question 11.

- a) Efficient
- b) Treatmeant
- c) Beterment
- d) Benficial
- e) Employd

Answer: Option a

The correctly spelt word is **Efficient**. The meaning of the word is able to work well without any mistake or wasting time and energy. The other words with correct spelling and meaning are:

Treatment: The use of medicine or medical care, the way you behave with anyone

Betterment: The improvement of something

Beneficial: Resulting in good, favorable and advantageous

Employed: Working person

Question 12.

- a) Pneumnoia
- b) Diarrhea
- c) Xeonphobia
- d) Amensia
- e) Dimensia

Answer: Option b

The correctly spelt word is **Diarrhea**. This is a disease which can be defined as: an illness that causes you to get rid of waste material (faeces) from your body very often and in a more liquid form than usual.

Xenophobia: dislike of or prejudice against people from other countries.

Amnesia: a partial or total loss of memory.

Dementia: the impaired ability to remember, think, or make decisions that interferes with doing everyday activities.

Question 13.

- a) Humorous
- b) Ganerous
- c) Pupolous
- d) Maretorious
- e) Treachours

Answer: Option a

The correctly spelt word is **Humorous**. The meaning of the word is full or characterized by that quality which appeals to a sense of ludicrous or absurdly congruous.

The other words with correct spelling and meaning are:

Generous: Happy to give more money

Populous: Having a large population

Meritorious: Deserving great praise or reward

Treachorous: Dangerous, Although seeming safe

Question 14.

- a) Faithfully
- b) Sincerely
- c) Truely
- d) Affectionatly
- e) Corectly

Answer: Option b

The correctly spelt word is **sincerely**. The meaning of sincerely is answering or replying in a truthful way. The other words with correct spelling and meaning are:

Faithfully: Remaining true to one's promise

Truly: Really, Completely

Affectionately: Feeling or showing some affection or warm regard

Correctly: To do it right

Question 15.

- a) Judicious
- b) Cancious
- c) Dilicious
- d) Gracious
- e) Obnoxious

Answer: Option a

The correctly spelt word is **Judicious**. The meaning of the word is sensible and carefully considered. The other words with correct spelling and meaning are:

Conscious: aware of and responding to one's surrounding

Delicious: Having a pleasant taste or smell

Gracious: Kind, Polite and generous

Obnoxious: Extremely unpleasant

Question 16.

- a) Friming
- b) Burning
- c) Running
- d) Fryng
- e) Thirng

Answer: Option c

The correctly spelt word is **running**. The meaning of the word is something which is in movable fast state.

Firming: Make more solid or resilient

Burning: Make more solid or resilient

Frying: Cook in hot food or oil

Thring: To push ahead

Question 17.

- a) Simpal
- b) Bannar
- c) Pattren
- d) Modern
- e) Santize

Answer: Option d

The correctly spelt word is **Modern**. Modern meaning is of present or recent times.

Simple: Easy to understand

Banner: A long piece of cloth

Sanitize: To remove parts of something that could be considered unpleasant

Question 18.

- a) Asspersion
- b) Voluptuous
- c) Voguei
- d) Equestrain
- e) Geneeration

Answer: Option b

The correctly spelt word is **Voluptuous**. The meaning of the word is curvaceous and sexually attractive.

Aspersion: An attack on the reputation or integrity of someone or something

Vogue: Prevailing fashion or style at a particular time

Equestrian: Connected with horse riding

Generation: All the people in a family

Question 19.

- a) Swelte
- b) Filpant
- c) Licentious
- d) Purle
- e) Docle

Answer: Option c

The correctly spelt word is **Licentious**. The meaning of the word will be showing a complete lack of moral discipline and standards.

Svelte: Thin in an attractive way

Flippant: Not serious about things that are important

Puerile: Childishly

Dolce: Swiftly or softly

Question 20.

- a) Grief
- b) Breif
- c) Recieve
- d) Diceive
- e) Reviv

Answer: Option a

The correctly spelt word is **Grief**. The meaning of the word will be Great sadness.

Brief: Of short duration

Receive: To get or accept something that somebody gives or sends to you

Deceive: Try to make somebody believe something that is not true

Revive: to restore to consciousness or life

Directions (21-30): Choose the incorrectly spelt word among all the given options.

Question 21.

- a) Acquaintance
- b) Maneouvre
- c) Erroneously
- d) Demurrage
- e) Exaggerate

Answer: Option b

Manoeuvre is the wrongly spelt word. The correct spelling of the word is *Manoeuvre*. The meaning of the word is a movement that needs care or skill. The meaning of other words are:

Acquaintance: A person we know but is not a close friend

Erroneously: False

Exaggerate: To make something seem larger

Demurrage: Demurrage is the charge paid by the owner of a chartered ship to load or discharge the ship

Question 22.

- a) Strategy
- b) Strenth
- c) Strictly
- d) Stretch
- e) Staunch

Answer: Option b

The incorrectly spelt word is **strenth**. The correct spelling will be : *Strength*. The meaning of the word will be: the quality of being physically strong. The other meaning of the words will be:

Strategy: A plan that you use in order to achieve something

Strictly: Rigorously

Stretch: To pull something that becomes wider

Staunch: Supporting something or somebody

Question 23.

- a) Rushed
- b) Routine
- c) Rubbish
- d) Runer
- e) Grudge

Answer: Option d

The incorrectly spelt word will be *Runer*. The correct spelling of the word will be *Runner*. The meaning is runner required in place of running in a cricket match. The other words meaning are:

Rushed: To move or do something with great speed

Routine: A sequence of actions regularly followed

Rubbish: A waste product to be discarded

Grudge: A persistent feeling of ill will

Question 24.

- a) Apparent
- b) Plesant
- c) Different
- d) Independent
- e) Occult

Answer: Option b

The incorrectly spelt word is *plesant*. The correct spelling of the word is *pleasant*. The meaning of the word is being happy or satisfied. The other words meaning are:

Apparent: That seems to be real or true but may not be

Different: Something not same

Independent: Free not controlled by any other

Occult: Hide, Conceal

Question 25.

- a) Exceeding
- b) Succeeding
- c) Proceeding
- d) Preceeding
- e) Notifying

Answer: Option d

The incorrectly spelt word is Preceeding. The correct spelling will be: Preceding. The meaning of the word will be: To come before somebody or something.

Exceeding: To be more than a particular number or amount

Succeeding: To manage or achieve something

Proceeding: To continue doing something

Notifying: To inform somebody of something

Question 26.

- a) Occasion
- b) Accountant
- c) Neccessary
- d) Accident
- e) Doubt

Answer: Option c

The incorrectly spelt word is Neccessary. The correct spelling will be: Necessary. The meaning of the word is: That is needed for a purpose or a reason.

Occasion: A particular time when something happens

Accountant: A person whose job is to keep official accounts

Accident: Mishappening

Doubt: Feeling of uncertainty

Question 27.

- a) Importance
- b) Insistance
- c) Appearance
- d) Tolerance
- e) Distance

Answer: Option b

The incorrectly spelt word is Insistance. The correct spelling will be: Instance. The meaning of the word will be: An example or case.

Importance: The quality of being important

Appearance: The way somebody looks or seems

Tolerance: The capacity or endure hardship

Distance: The amount of space between two

Question 28.

- a) Periphery
- b) Advurtise
- c) Courteous
- d) Indefinite
- e) Curious

Answer: Option b

The incorrectly spelt word is Advurtise. The correct spelling of the word is: Advertise. The meaning of the word is to advertise in newspaper.

Periphery: The putter edge of a particular area

Courteous: The meaning of courteous is polite

Indefinite: Not fixed or clear

Curious: Wanting to know or learn something

Question 29.

- a) Sincere
- b) Grievance
- c) Liesure
- d) Seize
- e) Tense

Answer: Option c

The incorrectly spelt word is Liesure. The correct spelling of the word is Leisure. Leisure means free time. The meaning of other words are:

Sincere: Really meaning or believing what you say

Grievance: Something we think is not valid and we have to complain about

Seize: To take hold of something suddenly and firmly

Tense: Not able to work or relax

Question 30.

- a) Dismiss
- b) Dispel
- c) Disservice
- d) Discribe
- e) Disrespect

Answer: Option d

The incorrectly spelt word is Discribe. The correct spelling of the word is Describe. The meaning of Describe will be to represent or elaborate

Th meaning of other words is:

Dismiss: To direct to disperse

Dispel: Vanish

Disservice: Faulty service, inadequate service

Disrespect: A lack of respect for somebody or something

Directions (Q.1-10) : In each of the following questions, fill in the blanks with correct idioms or phrases given in the options.

Q1. We thought the new product launch would be a huge success, but it turned out to be _____.

- A. damp squib
- B. The apple of my eye
- C. The ball is in your court
- D. A shot in the dark

Answer: A. A damp squib

Q2. After months of training, she finally ran her first marathon and felt like she had _____.

- A. Let the cat out of the bag
- B. Hit the nail on the head
- C. Bitten off more than she could chew
- D. Crossed the finish line

Answer: D. Crossed the finish line

Q3. I had to take the day off work because I was _____.

- A. Barking up the wrong tree
- B. In hot water
- C. Burning the midnight oil
- D. Feeling blue

Answer: D. Feeling blue

Q4. I'm not sure if I should take this job offer. I'm afraid I might be _____.

- A. Burning the candle at both ends
- B. Breaking a leg
- C. Cutting corners
- D. Biting the hand that feeds me

Answer: C. Cutting corners

Q5. I don't want to jump to conclusions, but I think my roommate might be _____.

- A. Pulling my leg
- B. Two-faced
- C. Barking up the wrong tree
- D. A bull in a china shop

Answer: B. Two-faced

Q6. I don't know how I'm going to finish this project on time. I feel like I'm _____.

- A. Between a rock and a hard place
- B. On cloud nine
- C. A fish out of water
- D. A diamond in the rough

Answer: A. Between a rock and a hard place

Q7. I've been studying for this exam for months, so I'm hoping to _____.

- A. Hit the ground running
- B. Have a field day
- C. Be a dark horse
- D. Have a lot on my plate

Answer: A. Hit the ground running

Q8. I don't think we should hire him. He seems like _____.

- A. A fish out of water
- B. The black sheep of the family
- C. A wolf in sheep's clothing
- D. The apple of my eye

Answer: C. A wolf in sheep's clothing

Q9. The company's new CEO has really turned things around. It's like a _____.

- A. Bolt from the blue
- B. A mare's nest
- C. A shot in the arm
- D. A storm in a teacup

Answer: C. A shot in the arm

Q10. I'm sorry, but I can't help you with your project. I'm already _____.

- A. Burning the candle at both ends
- B. A diamond in the rough
- C. Cutting corners
- D. Spreading myself too thin

Answer: D. Spreading myself too thin

Read the passage and answer the questions that follow :

Mike and Morris lived in the same village. While Morris owned the largest jewelry shop in the village, Mike was a poor farmer. Both had large families with many sons, daughters-in-law and grandchildren. One fine day, Mike, tired of not being able to feed his family, decided to leave the village and move to the city where he was certain to earn enough to feed everyone. Along with his family, he left the village for the city. At night, they stopped under a large tree. There was a stream running nearby where they could freshen up themselves. He told his sons to clear the area below the tree, he told his wife to fetch water and he instructed his daughters-in-law to make up the fire and started cutting wood from the tree himself. They didn't know that in the branches of the tree, there was a thief hiding. He watched as Mike's family worked together and also noticed that they had nothing to cook. Mike's wife also thought the same and asked her husband " Everything is ready but what shall we eat?". Mike raised his hands to heaven and said " Don't worry. He is watching all of this from above. He will help us." The thief got worried as he had seen that the family was large and worked well together. Taking advantage of the fact that they did not know he was hiding in the branches, he decided to make a quick escape. He climbed down safely when they were not looking and ran for his life. But, he left behind the bundle of stolen jewels and money which dropped into Mike's lap. Mike opened it and jumped with joy when he saw the contents. The family gathered all their belongings and returned to the village. There was great excitement when they told everyone how they got rich. Morris thought that the tree was miraculous and this was a nice and quick way to earn some money. He ordered his family to pack some clothes and they set off as if on a journey. They also stopped under the same tree and Morris started commanding everyone as Mike had done. But no one in his family was willing to obey his orders. Being a rich family, they were

used to having servants all around. So, the one who went to the river to fetch water enjoyed a nice bath. The one who went to get wood for fire went off to sleep. Morris's wife said " Everything is ready but what shall we eat ?" Morris raised his hands and said, " Don't worry. He is watching all of this from above. He will help us." As soon as he finished saying, the thief jumped down from the tree with a knife in hand. Seeing him, everyone started running around to save their lives. The thief stole everything they had and Morris and his family had to return to the village empty handed, having lost all their valuables that they had taken with them.

Question 1: Why did Mike and his family decide to rest under the thief's tree?

- A) Being a large family, they knew that they could easily defeat the thief
- B) It was a convenient spot for taking a halt at night
- C) There was a stream nearby and wood enough to build a house
- D) That was the only large tree that could shelter their large family

Solution: B) It was a convenient spot for taking a halt at night A is incorrect as they didn't know that a thief was hiding in the tree. C is incorrect as nothing has been mentioned in the passage about the amount of wood D is incorrect as nothing has been mentioned about the number of trees.

Question 2: Which of the following best describes Morris?

- A) He was a rich businessman
- B) He bullied his wife
- C) He paid his servants well
- D) He was greedy and imitated Mike

Solution : D) He was greedy and imitated Mike

Question 3: What did Mike mean when he said "He is watching all this from above"?

- A) He had spotted the thief and wanted to scare him
- B) He was telling his wife to have faith in god
- C) It was just a warning for his family members to stick together
- D) He was begging the thief to help his family

Solution: B) He was telling his wife to have faith in god

Question 4: Why did the thief return to the tree?

- A) To wait for Mike to return
- B) To set up a trap
- C) To wait for Morris's family
- D) Not mentioned in the passage

Solution : D) Not mentioned in the passage

Question 5: How did the fellow villagers react to Mike getting rich overnight?

- A) They were jealous of him
- B) They were very excited
- C) They followed his example
- D) They envied him

Solution: B) They were very excited

Read the passage and answer the questions that follow :

Reading is a fundamental skill that plays a vital role in our lives. It's not just about deciphering words on a page but about the doors it opens, the knowledge it imparts, and the worlds it allows us to explore. Reading is an essential tool for learning, expanding our horizons, and fostering imagination.

When we read, we acquire knowledge. Whether it's reading textbooks, newspapers, or online articles, we gain information that helps us understand the world. Books, in particular, are a treasure trove of knowledge. They contain the wisdom of generations, the discoveries of great minds, and the stories of diverse cultures.

Reading books can educate us on history, science, literature, and countless other subjects. It's like having a mentor, guiding us through the complexities of life.

Reading also broadens our horizons. It exposes us to different viewpoints, perspectives, and experiences. When we read about characters from various backgrounds or explore far-off lands through the pages of a novel, we step into their shoes and see the world from a different angle. This broadening of perspective fosters empathy and understanding, making us more tolerant and open-minded individuals.

Furthermore, reading fuels our imagination. Whether it's a fantasy novel, a science fiction story, or a compelling mystery, books transport

us to other worlds and challenge us to envision the unimaginable. Our minds become the canvas, and words paint the pictures. It's a magical experience that ignites creativity and inspiration.

Moreover, reading is a skill that transcends academic boundaries. It's not just about scoring well on tests; it's about developing critical thinking, analytical skills, and the ability to communicate effectively. A person who reads regularly is likely to have a broader vocabulary, better writing skills, and an improved ability to express their thoughts and ideas.

In our modern digital age, reading has taken on new forms. E-books and audiobooks have made it more accessible and convenient. With just a few clicks or taps, we can access a vast library of literature. However, there's something timeless and intimate about holding a physical book, flipping its pages, and smelling the scent of paper and ink.

In conclusion, reading is not just a hobby; it's a cornerstone of education, personal growth, and cultural enrichment. It empowers us with knowledge, broadens our perspectives, ignites our imagination, and equips us with essential skills. Whether we're reading for pleasure, information, or self-improvement, reading is a journey that enriches our lives and shapes us into more informed, empathetic, and creative individuals.

Question 1-What are some of the benefits of reading mentioned in the passage?

- A) Acquiring knowledge
- B) Physical exercise
- C) Developing cooking skills
- D) Enhancing video game proficiency

Solution: A) Acquiring knowledge. The passage clearly mentions that one of the benefits of reading is acquiring knowledge. The other options are not mentioned in the passage.

Question 2-How does reading broaden our horizons and foster empathy?

- A) By encouraging isolation
- B) By exposing us to different viewpoints and experiences
- C) By promoting narrow-mindedness
- D) By making us less tolerant

Solution: B) By exposing us to different viewpoints and experiences. The passage states that reading broadens horizons by exposing readers to different viewpoints and experiences, which fosters empathy. Options A, C, and D do not align with the passage's message.

Question 3-What role does reading play in developing critical thinking and communication skills?

- A) It has no impact on critical thinking or communication skills
- B) It broadens horizons but does not impact skills
- C) It expands vocabulary, improves writing skills, and enhances communication abilities
- D) It only helps with imagination but not critical thinking or communication

Solution: C) It expands vocabulary, improves writing skills, and enhances communication abilities. The passage explicitly mentions that reading helps in developing critical thinking, analytical skills, and better communication. Option C summarizes this point accurately.

Question 4-What are the advantages of reading physical books compared to digital formats?

- A) Physical books are more expensive
- B) Digital formats are more environmentally friendly
- C) Physical books offer a timeless and intimate experience
- D) Digital formats are easier to access

Solution: C) Physical books offer a timeless and intimate experience. The passage highlights that physical books offer a unique experience by allowing readers to hold and flip pages and enjoy the scent of paper and ink. Option C aligns with this description.

Question 5-How does reading enrich our lives and shape us as individuals, according to the passage?

- A) Reading has no impact on personal growth
- B) Reading makes us less informed and less creative
- C) Reading empowers us with knowledge, broadens our perspectives, and equips us with essential skills, making us more informed, empathetic, and creative individuals

D) Reading only fosters creativity but not empathy

Solution: C) Reading empowers us with knowledge, broadens our perspectives, and equips us with essential skills, making us more informed, empathetic, and creative individuals. The passage states that reading enriches our lives by empowering us with knowledge, broadening our perspectives, and equipping us with essential skills, ultimately making us more informed, empathetic, and creative individuals. Option C accurately summarizes this point.

3. Read the passage and answer the questions that follow :

Once upon a time, in a quaint little village nestled in a picturesque valley, there lived a young girl named Lily. She was known for her adventurous spirit and her deep curiosity. One sunny afternoon, while exploring the woods that bordered the village, Lily stumbled upon a hidden clearing. In the center of this secret meadow, she found an old oak tree with a peculiar nook. In that nook, half-buried in the earth, was a mysterious locket, ornate and gleaming with intricate designs. Lily carefully unearthed it, and as she held it in her hand, she felt a strange connection to this forgotten piece of jewelry.

Back in her cottage, Lily examined the locket more closely. It was made of silver with a hint of gold, and its surface was adorned with delicate engravings of leaves and flowers. On the front, there was an image of a crescent moon, and on the back, an engraving read, "To the one who seeks the truth." The locket was sealed tightly, and Lily couldn't open it no matter how hard she tried.

Determined to solve the mystery, Lily embarked on a quest to find someone who could open the locket. She asked the village blacksmith, the wise old woman who lived on the hill, and even the town's mayor, but none of them could unlock its secrets. Feeling a bit discouraged, Lily spent her days reading about ancient relics and searching for clues in the library.

One day, while immersed in an old book about mystical lockets, Lily came across a passage that mentioned the existence of a “key of the heart.” It said that this key could open the most stubborn of locks, but it was hidden within each person, waiting to be discovered. This newfound knowledge gave Lily a renewed sense of hope and determination.

The next morning, Lily decided to visit the village’s recluse, an elderly woman rumored to have deep knowledge of the heart. The recluse lived in a remote cottage surrounded by a lush garden. Lily knocked on the door and explained her quest. The old woman listened attentively and finally agreed to help. She told Lily that the key to opening the locket was hidden within her heart and that she needed to meditate on her truest desires and intentions.

Lily followed the recluse’s advice, sitting beneath the ancient oak tree where she had found the locket. She closed her eyes, focused on her heart’s deepest desires, and as she did, she felt the locket warming in her hand. When she opened her eyes, she found the locket had sprung open, revealing a tiny, folded parchment inside. With trembling hands, she carefully unfolded it and read the message: “The truth lies in the journey, not the destination.”

The mystery of the locket was solved, but Lily realized that the real treasure was the journey of self-discovery she had undertaken. She understood that her quest had led her to understand her heart’s desires and the power of her own determination.

Question 1- What did Lily discover in the hidden clearing in the woods?

- A) A hidden garden
- B) An old oak tree
- C) A mysterious book
- D) A magic wand

Solution: B) An old oak tree. The passage mentions that Lily discovered an old oak tree in the hidden clearing.

Question 2- What was inscribed on the back of the mysterious locket?

- A) “To the one who seeks adventure”
- B) “To the one who seeks answers”
- C) “To the one who seeks the truth”
- D) “To the one who seeks gold”

Solution: C) “To the one who seeks the truth”. The passage explicitly states that the locket had the inscription, “To the one who seeks the truth.”

Question 3- Who did Lily seek help from in opening the locket?

- A) The village blacksmith
- B) The wise old woman on the hill
- C) The town’s mayor
- D) All of the above

Solution: D) All of the above. Lily sought help from the village blacksmith, the wise old woman on the hill, and the town’s mayor, as mentioned in the passage.

Question 4- What did Lily learn from the passage about mystical lockets?

- A) The key to open them could be found in a library
- B) The key to open them was hidden within each person
- C) The key to open them was with the recluse in the village
- D) The key to open them was made of silver and gold

Solution: B) The key to open them was hidden within each person. The passage mentions that the key to opening mystical lockets was hidden within each person, waiting to be discovered.

Question 5- What message was inside the locket, and what did Lily realize about it?

- A) “The treasure is within”
- B) “The journey is the destination”
- C) “The truth is what you seek”
- D) “The mystery is yet unsolved”

Solution: B) “The journey is the destination”. The passage reveals that the message inside the locket was, “The truth lies in the journey, not the destination.” Lily realized that the real treasure was the journey of self-discovery, not just the locket’s opening.

4. Read the passage and answer the questions that follow :

In a quiet corner of the bustling city, there stood an old, dusty library. While most people hurried past, its unassuming exterior hid an incredible secret. The librarian, an elderly woman named

Ms. Abernathy, was not an ordinary librarian; she was the guardian of a magical library. One sunny afternoon, Sarah, an eighth-grader with an insatiable love for books, stumbled upon the library. She had always been drawn to stories of magic and adventure, and something about the library's unassuming facade piqued her curiosity. As she stepped inside, a small bell above the door tinkled, announcing her arrival. Ms. Abernathy greeted her with a warm smile, sensing Sarah's keen interest in books. Sarah soon discovered the true enchantment of the library. Its shelves held volumes that could transport readers to other worlds. She found herself immersed in tales of knights and dragons, enchanted forests, and talking animals. These books had a way of making her feel like she was right there, part of the adventure.

As the weeks passed, Sarah spent hours at the library, delving into one captivating story after another. She uncovered a book about a boy who could fly, and as she read, she felt her feet lifting off the ground. She found herself soaring over the city, experiencing the thrill of flight. Another day, she read about a time-traveling watch, and suddenly, she was witnessing historical events unfold before her eyes.

One day, as Sarah was browsing the shelves, she noticed a book titled "The Lost Amulet of Althoria." The cover featured a golden amulet with a shimmering blue gem. Ms. Abernathy explained that this was a unique book—it was unfinished. No one knew how the story ended because no reader had ever returned the book. Sarah decided to take on the challenge.

She opened the book and was immediately drawn into a tale of a young adventurer, Alaric, on a quest to find the lost amulet. She felt herself journeying through dark forests, crossing treacherous rivers, and facing mythical creatures. The more she read, the deeper she became entangled in the story. It was as though she had become Alaric, feeling his determination and bravery.

As the days turned into weeks, Sarah's friends and family grew concerned. She had become so absorbed in the book that she neglected her usual activities. Ms. Abernathy gently reminded

her to take breaks, but Sarah was determined to reach the end of the story.

Finally, one evening, as Sarah read the last page, she found herself standing in a clearing, facing an ornate door. Through the door, she saw a dazzling chamber with the lost amulet resting on a pedestal. With a deep breath, she opened the door and approached the amulet. As she touched it, a burst of blue light enveloped her, and she felt herself returning to the library. When she opened her eyes, she was back among the dusty bookshelves, holding the book in her hands. Ms. Abernathy congratulated her on completing the unfinished story. Sarah had not only finished the tale but had also experienced an adventure unlike any other. From that day on, Sarah continued to visit the magical library, understanding that the real magic was not just in the stories but in the way they made her feel and the adventures they allowed her to live.

Question 1- Where did Sarah discover the magical library?

- A) In a bustling city square
- B) In a hidden forest
- C) Inside her school
- D) At a friend's house

Solution: A) In a bustling city square. The passage mentions that the library was located in a quiet corner of the bustling city.

Question 2-What made Sarah's visits to the library so enchanting?

- A) The library's beautiful architecture
- B) The friendly librarian, Ms. Abernathy
- C) The shelves filled with books that could transport readers to other worlds
- D) The free snacks offered at the library

Solution: C) The shelves filled with books that could transport readers to other worlds. The passage describes how the books at the library had the power to transport readers to other worlds, making the visits enchanting.

Question 3- How did Sarah experience flight while reading a book?

- A) She found a flying broomstick in one of the books
- B) A magical spell was cast on her
- C) She read a book about a boy who could fly
- D) She used a time-traveling watch to fly

Solution: C) She read a book about a boy who could fly. The passage states that Sarah felt like she was flying when she read a book about a boy who could fly.

Question 4- What was unique about the book titled “The Lost Amulet of Althoria”?

- A) It was a book about history
- B) It was an incomplete story
- C) It was a book about a famous amulet
- D) It was written by Sarah’s favorite author

Solution: B) It was an incomplete story. The passage mentions that the book “The Lost Amulet of Althoria” was unique because it was unfinished, and no one knew how the story ended.

Question 5- How did Sarah complete the story in “The Lost Amulet of Althoria”?

- A) She met the author and asked for the ending
- B) She found a different book with the same ending
- C) She experienced the story by becoming the main character
- D) Ms. Abernathy told her the ending

Solution: C) She experienced the story by becoming the main character. The passage describes how Sarah was drawn into the story and felt as though she had become the main character, Alaric, thus completing the story.