CAT-2004

DETAILED SOLUTIONS

For Q.1 to Q.4 :

From both the table given in question, we can from following table.

	DAY			
University	**1**	**2**	**3**	**Possible country/ies**
University 1	1	0	0	India, Netherlands
University 2	2	0	0	UK, Canada
University 3	0	1	0	Netherlands
University 4	0	0	2	UK
University 5	1	0	0	India, Netherlands
University 6	1	0	1	USA
University 7	2	0	0	UK, Canada
University 8	0	2	0	India

1. University 1 can belong to India and Netherlands. **Ans.(3)**
2. University 5 can belong to India or Netherlands but it cannot belong to USA. **Ans.(1)**
3. UK will last 2 universities. **Ans.(2)**
4. Not a single country can host three university. At most they can last two universities. **Ans.(1)**
5. Option (4) is the right answer because options (1), (2), (3) have level of dissimilarity as 4 where as option (4) has level of dissimilarity as 3. **Ans.(4)**
6. Option (2) as level of dissimilarity is 4. **Ans.(2)**
7. Option (1) as level of dissimilarity is 2. **Ans.(1)**
8. Option (4) as level of dissimilarity is 4. **Ans.(4)**
9. **Ans.(4)**
10. **Ans.(3)**
11. **Ans.(1)**
12. **Ans.(4)**

For Q.13 to Q.16 :

After solving for the grades of Aparna, Fazal, Gowri, Rahul, Utkarsh and Vipul we get grades as F, F, C for Finance, Strategy and Operations resp. for Aparna. Rank of Fazal and Gowri is B and C in strategy resp. Rank of Rahul in Strategy is A. Ranks for Utkarsh in Finance and Marketing is D and B resp. rank for Vipul in Marketing is F. Now we can get all the answers.

13. **Ans.(4)**
14. **Ans.(1)**
15. **Ans.(3)**
16. **Ans.(2)**
17. As obvious the bars for both the Mixer grinders Naya & Purana are CUMULATIVE.

    The Naya MG disposed off by the end of 2000

    $= \frac{30\times 20}{100} + \frac{50\times 20}{100} = 16$. **Ans.(2)**

18. Total Naya - Mixer Grinders working in 1999 = 124

    Naya MG disposed off in 1999 = $\frac{30\times 20}{100} = 6$

    $\therefore$ Total naya MG purchased in 1999

    = (124 + 6) – 80 = 50. **Ans.(2)**

19. In 1997 the number of purana MG replaced = 10.

    From 1996 to 1997, 20 purana MG were newly introduced

    So, the total number of purana MG replaced in 1999 = 14 + (1/5)×30 = 20. **Ans.(1)**

20. Cannot be determined (same as previous question). **Ans.(4)**
21. (A) 2Kg P + 1 Kg < 1 Kg P + 2 Kg G

    P < G. But we don't get the answer.

    (B) P + 2 Onion = 1 Onion + 2k G

    (P + Onion)/2 = G

    But we can not get the answer.

    From (A) and (B), we get P < G < O

    So, O is the costliest. **Ans.(3)**
22. (A) 21 coin tosses implies he can reach to blue only. Red is not possible.

    Hence statement (A) alone is sufficient.

    (B) (x +3)T + xH = odd.

    Since total number of heads and tails equals odd, therefore he will reach to blue. Statement (B) alone is sufficient. **Ans.(2)**
23. Let No. of coins be Re.1 = a, Rs.2 = b, Rs.5 = c, Rs.10 = d

    (A) c + d – 1 = a + b.

    a + b + c + d = 13 $\Rightarrow$ a + b = 6, c + d = 7.

    Hence statement (A) alone is not sufficient .

    (B) a + 2b + 5c + 10d = 10 k

    where k is a constant.

    Hence, statement (B) alone is not sufficient combining, both the statements also, we can't get the Price article. Hence **Ans.(4)**
24. (A) From statement (A), either the topper and the second topper, will get equal no.of votes or the topper will get most votes. In case both are equal also. Topper can be selected as his score is higher. Hence statement (A) alone is sufficient.

    (B) from statement (B) alone, we can't get the answer. **Ans.(1)**
25. From statement (A), we can't tell whether Kumar is higher in rank to Rashmi or not. From statement (B), Top-5 have 3 boys. Sixth rank is Kumar. Hence there are only 2 girls above kumar. Hence, statement (B) alone is sufficient. **Ans.(1)**
26.

	CE	REC	HC
Zakib (Z)	30%	20%	10%
Subriyo (S)	40%	25%	13%

    From statement (A) we get

    0.2Z > 0.25S $\Rightarrow$ 0.3Z > 0.375S

    Hence, from (A) we don't get the Answer.

    From statement (B), we get

    0.13 S > 0.1 Z $\Rightarrow$ 0.39S > 0.3Z

    Hence Supriyo spends more on CE. Hence, statement (B) alone is sufficient. **Ans.(1)**

For Q.27 to Q.30 : We summarise the match data in the this table

Match 1 Vs. Pakistan	Match 2 Vs. South Africa	Match 3 Vs. Australia
V + Y + K = 198 runs and this is 90% of total runs scored.	K + S + R = 175 runs and this is 70% of total runs scored	R + Y + S = 192 runs and this is 80% of total runs scored.
So total runs = 220	So total runs = 250	So total runs = 240
Runs scored by remaining 8 batsmen = 22	Runs scored by remaining 8 batsmen = 75	Runs scored by remaining 8 batsmen = 48

Now, we compile the possible runs scored by the 5 listed players [K, R, S, V, Y]

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	K	R	S	V	Y
Highest	51	55	75	130	87
2nd Possible	28	49	50	0 - 75	40
3rd Possible	0 - 48 (any thing)	0 - 22 (any thing)	0 - 22 (any thing)	0 - 48 (any thing)	0 - 75 (any thing)

Now, if we want to calculate M-index, it is only possible for R & S, because K's third score can be greater than or less than 28 (his second score). Same for Y, his third score can also be greater than or less than 40 (his second score). Obviously, V does not have either a possible 2nd or 3rd score. So, its not possible to determine his M-index

27. Option (2) is the correct option. Saurav at 50 is better than Rahul at 49. **Ans.(2)**

28. The R – indices of the players will be as given.

	Highest	2nd score	lowest		R-index range
			best	worst	
K	51	28	48	0	23-51
R	55	49	22	0	33-55
S	75	50	22	0	53-75
V	130				
Y	87	40	75	0	47-87

As obvious from this table the correct answer is option (4). **Ans.(4)**

29. As explained before, it is possible to calculate the exact M index for R and S. Therefore, answer is option (3). **Ans.(3)**

30. V has scored 130 (one match) against Y's 127 + possible 3rd.

S has scored 125 (+possible 3rd) against Y's 127 + possible 3rd

K if scores 48 in 3rd match would be tied with Y (if he scores 0 in 2nd match)

R has scored 104 in two matches. Now in the third match he can score max. 22. Even then he will definitely be behind Y (127) even if Y scores 0 in 2nd match. **Ans.(2)**

For Q.31 to Q.34 :

We will interpret the information given in the form of a table shown below :

	Labour	Health	PS	RR	Total
Africa	X				b
Americas					2b
Australasia			Mike, Alfanso		b+1
Europe					b
Total	a	2a	2a	2a	21

Now solving for a and b, we get 7a = 21 and 5b + 1 = 21

$\Rightarrow$ a = 3 and b = 4

Now we will complete the table and get all answers

	Labour	Health	PS	RR	Total
Africa	X				4
Americas	1				8
Australasia	1	1	Mike, Alfanso	1	5
Europe	1	1	1	1	4
Total	3	6	6	6	21

Now all the answer can be obtained

31. **Ans.(4).**

32. **Ans.(4).**

33. **Ans.(3).**

34. **Ans.(3).**

For Q.35 to Q.36 :

From the given information following is the only possible combination for 1st 2 rounds.

Round 1

Spain Vs Germany	Argentina Vs New Zealand	Pakistan Vs S.A.
0 – 1	1 – 0	2 – 0

Round 2

Spain Vs NZ	Argentina Vs Pakistan	Germany Vs S.A.
5 – 1	1 – 0	2 – 1

35. **Ans.(4).**

36. **Ans.(2).**

For Q.37 and Q.38 :

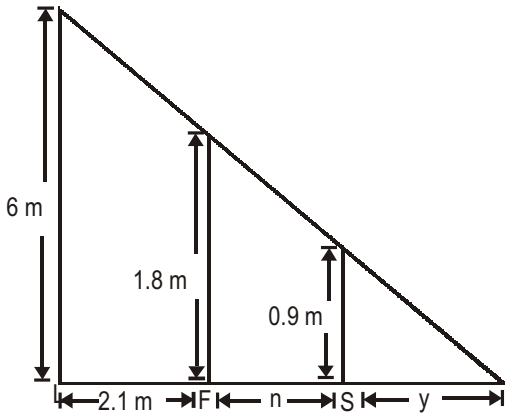
From the information given in round (5) there are 4 teams winning their matches which is not possible. Hence answer for (37) and (38) are option (4)

37. **Ans.(4).**

38. **Ans.(4).**

39. Let F stands for father and S stands for son.

$\frac{1.8}{0.9} = \frac{n+y}{y} \Rightarrow n + y = 2y$



$\frac{6}{1.8} = \frac{2.1+n+y}{n+y} \Rightarrow \frac{10}{3} = \frac{2.1+2n}{2n}$

20n = 6.3 + 6n

$\Rightarrow$ 14n = 6.3 $\Rightarrow$ n = 0.45. **Ans.(4).**

40.

	Water	Milk
Initially	20	80
After Selling one-fourth	(20 – 5) = 15	(80 – 20) = 60
After adding water to replenish the quantity	40	60

Required ratio = 2 : 3. **Ans.(1).**

41. If Karan runs 100m then Arjun runs 90 metres. So, their speeds are in the ratio of 10 : 9.

Now, if Karan runs 110 m then Arjun runs 99m. **Ans.(4)**

42. Total time for singing is 28 min. Each pair sings the song for two min.

i.e. number of pairs = 14

Now going with options : option (2) – 7

Possible pairs are

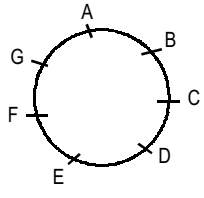
AC, BD, CE, DF, EG

AD, BE, CF, DG

AE, BF, CG

AF, BG

Total value of N is 7. **Ans.(2)**



43. $\frac{11}{2}(2a + 10d) = \frac{19}{2}(2a + 18d)$

$22a + 110d = 38a + 342d \Rightarrow 16a + 232d = 0 \Rightarrow 2a + 29d = 0$. **Ans.(1)**

44. Let the distance be 'd' kms, then by the condition given in question

$\frac{d}{10} - \frac{d}{15} = 2 \Rightarrow d = 60$ km.

Let he cycle at the rate of x kmph to reach at the place at noon.

then, $\frac{60}{10} - \frac{60}{x} = 1 \Rightarrow \frac{60}{x} = 5 \Rightarrow x = 12$ kmph. **Ans.(2)**

45. By the condition given in question

$n + 6b = n \times r^6$

$n + 6 \times 10.5 \times n = n \times r^6$

$n + 63n = n \times r^6$

$64n = n \times r^6$

$r^6 = 64 \Rightarrow r = 2$. **Ans.(1)**

46. Only two pairs satisfying the equation are (0, 0) and (2, 2). **Ans.(3)**

47. $f(0) = p$

$f(1) = p - 3 \Rightarrow p(p - 3) < 0 \Rightarrow 0 < p < 3$. **Ans.(2)**

48. Sum of the digits of n is 2.

For $10 < n < 10^2$ total different possible values of n = 11, 20 i.e., 2

For $10^2 < n < 10^3$ total different possible values of n = 101, 110, 200 i.e., 3

⋮

For $10^{10} < n < 10^{11}$ total different possible values of n = 10000000001, 10000000010, 10000000100, 10000001000, 10000010000, 10000100000, 10001000000, 10010000000, 10100000000, 11000000000, 20000000000 i.e., 11. **Ans.(1)**

49. $\frac{a}{b+c} = \frac{b}{c+a} = \frac{c}{a+b} = r$

By option, if $r = \frac{1}{2}$

$\Rightarrow$ $2a - b - c = 0$

$2b - c - a = 0$

$2c - a - b = 0$

$\Rightarrow$ $2(a + b + c) - (a + b + c) - (a + b + c) = 0$

Similarly $r = -1$ is also satisfied. **Ans.(3)**

50. $y = \cfrac{1}{2 + \cfrac{1}{3 + \cfrac{1}{2 + \cfrac{1}{3 + \ldots}}}}$

$y = \cfrac{1}{2 + \cfrac{1}{3 + y}} \Rightarrow y = \frac{3 + y}{2y + 7}$

$2y^2 + 7y = 3 + y \Rightarrow 2y^2 + 6y - 3 = 0$

$y = \frac{-6 \pm \sqrt{36 + 4 \cdot 2 \cdot 3}}{4} = \frac{-6 \pm \sqrt{60}}{4} = \frac{\sqrt{15} - 3}{2}$. **Ans.(4)**

51. $f(x) = ax^2 - b|x|$

if $x > 0$ $f(x) = ax^2 - bx$

$f'(x) = 2ax - b$, $f''(x) = 2a$

So if $a > o$ and $b < 0$, $f''(x) > 0$ and f(x) will be minimum at $x = 0$

For $x < 0$

$f(x) = ax^2 + bx$

$f'(x) = 2ax + b$, $f''(x) = 2a$

In this case also when $a > 0$, $b < 0$ $f''(x) > 0$ or f(x) will be minimum value at $x = 0$. **Ans.(4)**

52. Required distance = Relative speed of boats × time

$= (5 + 10) \times \frac{1}{60} = \frac{15}{60} = \frac{1}{4}$. **Ans.(3)**

53. From the conditions of the question, we have

Adults > Boys > Girls > Families

Going by options,

Number of Families	Maximum Number of Adults	Minimum Number of Children	Boys	Girls	
2	4	6	3	3 (Families < Girls)	**Not possible** (Since Boys
3	6	9	5	4 (Families	-
4	8	12	-	-	-

Ans.(4)

54. Time required to make 9000 nuts $= \left(\frac{1000}{100} + 5\right) \times 9 - 5 = 130$ min.

Time required to make 9000 bolts $= \left(\frac{1500}{75} + 10\right) \times 6 - 10 = 170$ min

So required time = 170 min. **Ans.(3)**

55. Let the longer side of the rectangle = a

and the shorter side of the rectangle = b.

After folding, longer side = b and shorter side = a/2

Then, by the condition given in question

$\frac{a}{b} = \frac{b}{a/2} \Rightarrow \frac{a^2}{2} = b^2$

Again b = 2 (given in question)

$\Rightarrow \frac{a^2}{2} = 4 \Rightarrow a = 2\sqrt{2}$. So, area of smaller rectangle = $\frac{2\sqrt{2}}{2} \times 2 = 2\sqrt{2}$. **Ans.(2)**

56. Δ PRO and Δ QSO are similar

$\frac{4x}{28} = \frac{3x}{OQ} \Rightarrow OQ = 21$

$\therefore$ $PQ = 7 \Rightarrow \frac{PQ}{QO} = \frac{7}{21} = \frac{1}{3}$. **Ans.(2)**

57. $4x + 3x = PQ = 7$

$\Rightarrow x = 1$. So, the radius of circle II = 3 cm. **Ans.(2)**

58. $3^2 + SO^2 = 21^2$

$\Rightarrow SO^2 = 21^2 - 3^2$

$\Rightarrow SO^2 = 432 \Rightarrow SO = 12\sqrt{3}$. **Ans.(3)**

59. Since AC || ED

$\angle DEC = \angle ECA$

Join AE

$\angle AEC = 90^\circ$ (Angle in a Semicircle)

$\angle EBC = 65^\circ$ (given)

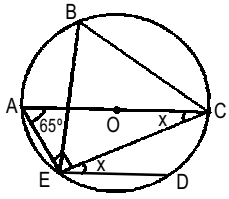
$\therefore$ $\angle EAC = 65^\circ$

(angle by same arc EDC on the circumference)

Now in Δ AEC

$65^\circ + 90^\circ + x^\circ = 180^\circ$

$\therefore$ $x = 25^\circ$. **Ans.(4)**



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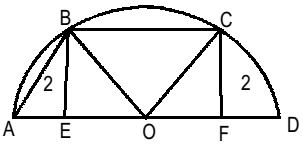
60. Let O be the centre of the semicircle.

AD = 8 (given). Hence OB = OC = 4

Let EO = OF = x.



Drop $\perp$ BE and CF

Let BE = CF = a. AB = CD = 2 (given)

Hence, AE = FD = 4 – x

$\therefore$ EF = 8 – 2x

From ΔABE, $4 = a^2 + (4 - x)^2$ ...(1)

Also from ΔBEO, $16 = a^2 + x^2$ ... (2)

Solving (1) & (2), we get, x = 3.5. Therefore EF = BC = 7. **Ans.(2)**

61. Take values of 1, –1 and 2 and check for the results

for x = 1

$f_1(1) = 1$, $f_2(1) = f_1(-1) = 0$

$\therefore$ $f_3(1) = -f_2(1) = -f_1(-1) = 0$

$f_4(1) = f_3(-1) = -f_2(-1) = -f_1(1) = -1$

$\therefore$ $f_1(1) \cdot f_2(1) = 1 \times 0 = 0$

$f_2(1)\, f_3(1) = 0 \times 0 = 0$

$f_2(1) f_4(1) = 0 \times -1 = 0$

Now for x = –1

$f_1(-1) = 0$: $f_2(-1) = f_1(1) = 1$

$f_3(-1) = -f_2(-1) = -f_1(1) = -1$

$f_4(-1) = f_3(1) = -f_2(1) = -f_1(-1) = 0$

$\therefore$ $f_1(-1).f_2(-1) = 0$: $f_2(-1)\, f_3(-1) = 1 \times -1 = -1$

$f_2(-1)\, f_4(-1) = 0$

Hence only $f_1(x)f_2(x)$ and $f_2(x)f_4(x)$ are necessarily zero always . **Ans.(3)**

62. $f_2(x) = f_1(-x)$

$f_3(x) = -f_2(x) = -f_1(-x)$

$f_4(x) = f_3(-x) = -f_2(-x) = -f_1(x)$

from above we can observe that only option [2] is correct. **Ans.(2)**

63. A + B + C = 100 (total number of questions)

Total marks = A + 2B + 3C

B = 23

Check by options

C = 1, B = 23, A = 76

A = 76 questions $\Rightarrow$ 76 marks

A + 2B + 3C = 76 + 46 + 3 = 125

60% of total = 12.5 × 6 = 75

Satisfies option (1). **Ans.(1)**

64. C = 8

B = 12 (option 2)

Total marks = 80 +24 + 24 = 128

B = 24, 20% of 128 = 25.6

$\therefore$ (12) not satisfying

Option(3) C = 8, B = 13, A = 79

Total Marks = 79 + 26 + 24 = 129

20% of 129 = 12.9 × 2 = 25.8

Marks of B = 13 × 2 = 26

C = 8, B = 14, A = 78

Total Marks = 78 + 28 + 24 = 130

20 % of 130 = 26

Marks of B = 2 × 14 = 28

Check for A (60% of total) = 130 × 0.6 = 78

Option (4); C = 8, B = 15, A = 77

Total Marks = 77 + 30 + 24 = 131

20% = 26.2 and not 26.1

B marks = 30 satisfying

60 % of total = 0.6 × 131 = 78.6

$\therefore$ not satisfying since less than 60%. **Ans.(3)**

65. The distances run by the sprinter in 30 sec, 1 min, 2 min, 4 min and so on are

$\pi r \times \frac{1}{2}$m, $\frac{\pi r}{2} \times 1$, $\frac{\pi r}{4} \times 2$, $\frac{\pi r}{8} \times 4$

and so on respectively i.e. we can observe that the distances travelled in the given times has been constant.

Let nth round be 2nd round then (n – 1)th round will be 1st round

Time taken to run first round = $\frac{1}{2}$ + 1 + 2 + 4 = 7.5 min

Time taken to run 2nd round = 8 + 16 + 32 + 64 = 120 min

$\therefore$ Required ratio = $\frac{120}{7.5} = 16:1$. **Ans.(3)**

66. $a_1 = 81.33$

$a_2 = -19$

$a_3 = a_2 - a_1$

$a_4 = a_3 - a_2 = -a_1$

$a_5 = a_4 - a_3 = -a_2$

$a_6 = -a_2 + a_1$

$a_7 = a_1$, $a_8 = a_2$.

Repeated loop a1 to a6 (6 terms) has sum "0"

$\Rightarrow$ $a_{6002} = a_1 + a_2$

= 81.33 – 19

= 62.33. **Ans.(3)**

67. Since $15^{23} + 23^{23}$ is of the form $a^m + b^n$ where mondn are odd numbers, then it is definitely divisible by a + b. Apply this concept $15^{23} + 23^{23}$ will always be divisible by 19. Hence remainder = 0. **Ans.(3)**

68. If we have m lines in north direction and n lines in west direction then the total number of ways to move from one end to the diagonally opposite end is given by $(m + n - 2)\, C_{n-1}$

$\therefore$ Required answer is $(6 + 4 - 2)C_{4-1} = {}^8C_3 = 56$. **Ans.(2)**

69. Let the diameter of circle C

AB = x

Now $P_0B = x/2$

As P_1 is the mid point

$P_0P_1 = x/4 = P_1B$

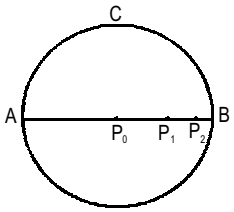
$\therefore$ Radius of $C_1 = x/8$

and $P_1P_2 = x/8 = P_2B$

radius of $C_2 = P_1P_2 = x/16$

and Radius of $C_3 = P_2P_3 = x/32$

Now area of $C_1 + C_2 + C_3 + ... =$



$$\pi\left(\frac{x}{8}\right)^2 + \pi\left(\frac{x}{16}\right)^2 + \pi\left(\frac{x}{32}\right)^2 + ... \infty$$

$$= \pi x^2 \left(\frac{1}{64} + \frac{1}{256} + \frac{1}{1024} + ...\infty\right)$$

This is an infinite G.P with common ratio 1/4

$$= \pi x^2 \times \frac{\frac{1}{64}}{1 - \frac{1}{4}} = \frac{\pi x^2}{48}$$

Area of unshaded region = $\frac{\pi x^2}{4} - \frac{\pi x^2}{48} = \frac{11 \times \pi x^2}{48}$

Ratio of unshaded portion to original circle = $\frac{11 \times \pi x^2}{48} : \frac{\pi x^2}{4}$ = 11 : 12.

Ans.(4)

70. We have $u = (\log_2 x)^2 - 6 \log_2 x + 12$

$\Rightarrow$ put $\log_2 x = y \Rightarrow x = 2^y$

$\Rightarrow x^u = 256 \Rightarrow x^u = 2^8 \Rightarrow 2^{uy} = 2^8 \Rightarrow uy = 8 \Rightarrow u = 8/y$

$\Rightarrow u = y^2 - 6y + 12 \Rightarrow \dfrac{8}{y} = y^2 - 6y + 12$

$\Rightarrow 8 = y^3 - 6y^2 + 12y \Rightarrow y^3 - 6y^2 + 12y - 8 = 0$

$\Rightarrow (y - 2)(y^2 - 4y + 4) = 0$ either $y - 2 = 0$ or $(y - 2)^2 = 0 \Rightarrow y = 2$

Hence equation has exactly one solution for x. **Ans.(2)**

71. The flags have to be arranged in a vertical order as shown below

6
5
6
3
2
1

For the first place we can use anyone of the 4 flags in 4 ways.

For the second place we can use only 3 of the remaining flags and similarly for the 3rd, 4th, 5th and 6th place we can use 3 flags.

$\therefore$ Required number of ways = $4 \times 3^4 = 12 \times 81$. **Ans.(1)**

72. Let the side of cube = a

$\therefore$ DF = AG = CE = $a\sqrt{3}$

Now these sides form an equilateral triangle of side $a\sqrt{3}$

Area of equilateral $\Delta = \dfrac{3\sqrt{3}}{4} \times a^2$

Circumradius of the triangle = $\dfrac{(\text{side})^3}{4A} = \dfrac{\left(\left(a\sqrt{3}\right)\right)^3}{4 \times \frac{3\sqrt{3}}{4} a^2} = a$. **Ans.(1)**

73. In triangle $O_2 B_1 A$

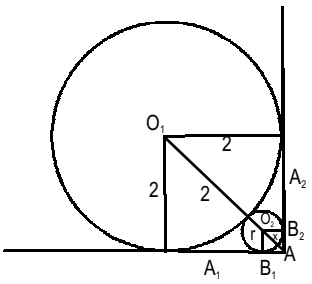
$x^2 = r^2 + r^2 \Rightarrow x = r\sqrt{2}$

In triangle $A_1 O_1 A$

$2^2 + 2^2 = (2 + r + x)^2$

$\Rightarrow 2\sqrt{2} = 2 + r + x$

$2\sqrt{2} - 2 = r(1 + \sqrt{2})$



$r = \dfrac{2\sqrt{2} - 2}{1 + \sqrt{2}} \times \dfrac{\sqrt{2} - 1}{\sqrt{2} - 1} = 2(2 + 1 - 2\sqrt{2}) = 6 - 4\sqrt{2}$. **Ans.(4)**

74. **Ans.(3).** Since the White House has been described as 'as serene as a resort hotel out of season' the corridors have to be unoccuppied. The choice is between hollow and empty. But in the context of corridors, empty is the correct choice.

75. **Ans.(1).** The blank needs a word synonymous with the description of gray men talking in 'low pitched voices'. So we eliminate options 3 and 4. Option 2 is contextually ill-fitted. Therefore option 1 is the answer as it is synonymous with 'low pitched voices'.

76. **Ans.(4).** In the context of scowling, the best answer is 4.

77. **Ans.(1).** The word 'paced' means 'walk at a steady and consistent speed, especially without a particular destination and as an expression of one's anxiety or annoyance.' Hence the answer is 1.

78. **Ans.(2).** In context of the remaining paragraph, the statement is blunt.

79. **Ans.(1).** In the context of unpaid taxes, the best word will be 'interest'.

80. **Ans.(4).** The correct option is 'fines'.

81. **Ans.(3).** In the context of royalties and trust funds, 'Attached' would be appropriate because even though both 'atttached' and 'impounded' are used for confiscation, 'impounded' is used more favourably for vehicles, goods, or documents.

82. **Ans.(2).** In the context of automobiles, 'seized' is the best option.

83. **Ans.(4).** Ramesh is talking about what happens when Income Tax department takes action against those who do not pay their taxes. Hence, 'offender' is the best answer.

84. **Ans.(2).** Statement B is incorrect, the correct usage is 'guilty to'.

Statement D is incorrect, the correct usage is 'sentenced to'.

85. **Ans.(1).** Statement B is incorrect, the correct usage is 'thinking what to do'.

Statement C is incorrect, the correct usage is 'took a shower'.

86. **Ans.(3).** Statement B is incorrect, the correct usage is 'efforts bore'.

Statement C is incorrect, the correct usage is 'complimented her on'.

87. **Ans.(3).** The only grammatically correct option is 3.

88. **Ans.(4).** The only grammatically correct option is 4.

89. **Ans.(3).** The only grammatically correct option is 3.

90. **Ans.(2).** The only incorrect usage is option 2. The correct usage is 'As he could not move, he couldn't make a bolt for the gate.'

91. **Ans.(1).** The only incorrect usage is option 1. The correct usage is 'She did not have pass marks in mathematics'.

92. **Ans.(4).** The only incorrect usage is option 4. The correct usage is 'The headmaster could not understand the failure of several of his good students at the public examination.'

93. **Ans.(1).** The link is DAC.

94. **Ans.(4).** The link is DBA.

95. **Ans.(2).** The link is BED

96. **Ans.(2).** The answer is option 2.

97. **Ans.(1).** The answer is option 1.

98. **Ans.(2).** The same is manifested in paragraph 4, which talks about how automobile industry, inspite of spending tens of billions of dollars on research, still ended up with the same things, as were a century back. Even the average speed of driving in a city more or less remained same! The rest of the options are negated in the passage.

99. **Ans.(4).** This is manifested in the 5th paragraph in which the author quotes the example of jet planes, in addition to the automobile (ford) example quoted earlier. He states that the only changes to have taken place are incremental and largely cosmetic. The rest are negated in the passage.

100. **Ans.(2).** It is one of the main ideas as the author has quoted the examples of Ford and jet planes to prove that industry is not as innovative as it looks to be. The rest are not in line as per the passage and are discarded.

101. **Ans.(1).** The same is manifested in the last paragraph which states that if the recommended change happened, the auto executives would be rendered useless since they understood pistons and carburetors and an electrical engine would scrap the entire need for the same. The rest of the options are not supported by the passage.

102. **Ans.(2).** The same is manifested in paragraph no.8 where it is stated that in a culture which is in a state of disintegration or transition, the painter chooses his subject in two ways, either from the lives of the people or finds his subjects within himself. Hence, the meaningfulness of subject to the painter. The rest of the options cannot be substantiated.

103. **Ans.(3).** The same is manifested in the 1st paragraph where the passage states that a painter is today free to paint anything he chooses and there is no such thing as forbidden subject. So the two developments are the freedom of the painter and the abandonment of the subject. The rest are not correct in context to the question.

104. **Ans.(4).** The passage doesn't mention that the selection of subjects should be inspired by historical developments for a painter to succeed.

105. **Ans.(1).** This option is not true, as it does not find any mention in the passage. The rest of the options are mentioned and true in context to the passage and hence are discarded.

106. **Ans.(1).** The answer can be found in the 2nd last paragraph, which states that when a culture is in a state of disintegration or transition, the painter has more freedom of choice. The rest of the options are not correct in context to the question.

107. **Ans.(4).** The author describes the fallout of the New Imperialism and New mercantilism by explaining how it creates the same set of output, which creates disturbances. Option 3 is a close call as it explains the process of these two that results in such fallout.

108. **Ans.(1).** The same is manifested in the 1st paragraph, which mentions the reasons of Britain becoming defensive because of its inability to cope with its rapid accumulation of capital. The rest of the options are irrelevant in context to the question.

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109. **Ans.(4).** The Centre here means the new mercantilism as stated in paragraph 3, the rest are wrong.

110. **Ans.(3).** The answer is manifested in the second last paragraph, which states that it seeks only for promotion within the corporate structure and not for a break with that structure. The rest are irrelevant and hence are discarded.

111. **Ans.(2).** Option (2), manifested in the opening and fourth paragraphs of the passage, depicts the reason for the Type-B malnutrition as a serious concern in developed countries. Options (1), (3) and (4) are irrelevant in the given context. Hence, option (2) is the correct option.

112. **Ans.(4).** The opening paragraph of the passage manifests option (4), which serves as the reason for a large number of apparently healthy people deemed pre-ill. Options (1), (2) and (3) are irrelevant in the given context. Hence, option (4) is the correct option.

113. **Ans.(1).** The last paragraph of the passage depicts option (1) as the reason for the author recommending micronutrient-repletion for large-scale treatment of chronic degenerative diseases. Options (2), (3) and (4) are irrelevant in the given context. Hence, option (1) is the correct option.

114. **Ans.(3).** Option (3), manifested in the last paragraph of the passage, depicts the reason that why tailoring micronutrient-based treatment plans to suit individual deficiency profiles is not necessary. Options (1), (2) and (4) are irrelevant in the given context. Hence, option (3) is the correct option.

115. **Ans.(3).** The third paragraph of the passage depicts option (3) as the reason for the book Man-Eaters of Tsavo annoying some scientists. Options (1), (2) and (4) are irrelevant in the given context. Hence, option (3) is the correct option.

116. **Ans.(3).** Option (3) does not contribute to the popular image of Tsavo lions as savage creatures. Options (1), (2) and (4) are irrelevant in the given context. Hence, option (3) is the correct option.

117. **Ans.(3).** The opening paragraph of the passage manifests option (3) as the implication of the sentence which concludes the first paragraph, "Now they knew better". Options (1), (2) and (4) are irrelevant in the given context. Hence, option (3) is the correct option.

118. **Ans.(3).** The hypothesis advanced by Gnoske and Peterhans is "Is there any connection between their manelessness and their ferocity?". Now, if option (3) is true, then it would weaken the hypothesis because in this case, Pleistocene cave lions would not have a close resemblance to the Tsavo lions. Options (1), (2) and (4) are irrelevant in the given context. Hence, option (3) is the correct option.

119. **Ans.(1).** The link is CE and BA.

120. **Ans.(3).** The link is ED.

121. **Ans.(2).** The answer is option 2.

122. **Ans.(4).** The answer is option 4.

123. **Ans.(3).** The link is 3.

Objective Key

1.(3)	2.(1)	3.(2)	4.(1)	5.(4)	6.(2)	7.(1)	8.(4)	9.(4)	10.(3)
11.(1)	12.(4)	13.(4)	14.(1)	15.(3)	16.(2)	17.(3)	18.(2)	19.(4)	20.(4)
21.(3)	22.(2)	23.(4)	24.(1)	25.(1)	26.(1)	27.(2)	28.(4)	29.(3)	30.(2)
31.(4)	32.(4)	33.(3)	34.(3)	35.(4)	36.(2)	37.(4)	38.(4)	39.(4)	40.(1)
41.(4)	42.(2)	43.(1)	44.(2)	45.(1)	46.(3)	47.(2)	48.(1)	49.(3)	50.(4)
51.(4)	52.(3)	53.(4)	54.(3)	55.(2)	56.(2)	57.(2)	58.(3)	59.(4)	60.(2)
61.(3)	62.(2)	63.(1)	64.(3)	65.(3)	66.(3)	67.(3)	68.(2)	69.(4)	70.(2)
71.(1)	72.(1)	73.(4)	74.(3)	75.(1)	76.(4)	77.(1)	78.(2)	79.(1)	80.(4)
81.(3)	82.(2)	83.(4)	84.(2)	85.(1)	86.(3)	87.(3)	88.(4)	89.(3)	90.(2)
91.(1)	92.(4)	93.(1)	94.(4)	95.(2)	96.(2)	97.(1)	98.(2)	99.(4)	100.(2)
101.(1)	102.(2)	103.(3)	104.(4)	105.(1)	106.(1)	107.(4)	108.(1)	109.(4)	110.(3)
111.(2)	112.(4)	113.(1)	114.(3)	115.(3)	116.(3)	117.(3)	118.(3)	119.(1)	120.(3)
121.(2)	122.(4)	123.(3)							