Q1. In an examination, there are three papers and a candidate has to get $35 \%$ of the total to pass. In one paper, he gets 62 out of 150 and in the second 35 out of 150. How much must he get, out of 180, in the third paper to just qualify for a pass?
(a) 60.5
(b) 68
(c) 70
(d) 71
(e) None of these

Q2. At what percent above the cost price must a shopkeeper mark his goods so that he gains $20 \%$ even after giving a discount of $10 \%$ on the marked price?
(a) $25 \%$
(b) $30 \%$
(c) $331 / 3 \%$
(d) $371 / 2 \%$
(e) None of these

Q3. $125,127,130,135,142,153,165$
(a) 130
(b) 142
(c) 153
(d) 165
(e) None of these

Q4. Gold is 19 times as heavy as water and copper is 9 times as heavy as water. In what ratio must these metals be mixed so that the mixture may be 12 times as heavy as water?
(a) $2: 3$
(b) $3: 7$
(c) $1: 3$
(d) $7: 3$
(e) None of these

Q5. Rajan got married 8 years ago. His present age is $6 / 5$ times his age at the time of his marriage. Rajan's sister was 10 years younger to him at the time of his marriage. The age of Rajan's sister is:
(a) 32 years
(b) 36 years
(c) 38 years
(d) 40 years
(e) None of these
(6-10)
Sidhartha has decided to start a new company 'Sidhartha Travels'. He wants to buy some furniture - table, chair, air conditioners. He also wants to buy a few desktops which will include monitor, CPU, Keyboard and mouse. The cost of each table is 13.5 times the cost of a mouse and the cost of a chair is $3 / 5$ of the cost of a table. The cost of an air conditioner is 5 times the cost of a chair. The cost of a monitor is $20 \%$ more than the cost of a chair, A CPU costs Rs. 1500 more than a table and the
keyboard costs 4 times a mouse. The cost of a mouse is Rs. 1000.

Q6. What will be the total cost of 1 table and 2 chairs together?
(a) Rs. 23,200
(b) Rs. 28,800
(c) Rs. 29,700
(d) Rs. 24,700
(e) Rs. 21,300

Q7. What is the ratio of the cost of a CPU to the total cost of a mouse and a keyboard together?
(a) $3: 2$
(b) $4: 1$
(c) $3: 1$
(d) $5: 1$
(e) $5: 3$

Q8. If the cost of a keyboard and a mouse increases by $20 \%$ and $15 \%$ respectively, what will be the total cost of a desktop (given that the cost of a CPU and a monitor is the same)?
(a) Rs. 36,930
(b) Rs. 32,640
(c) Rs. 34,753
(d) Rs. 30,670
(e) Rs. 35,425

Q9. Sidhartha bought 1 table, 1 chair and 1 desktop for himself. What was the total cost incurred to him?
(a) Rs. 53,400
(b) Rs. 51,460
(c) Rs. 50,640
(d) Rs. 55,440
(e) Rs. 51,320

Q10. It was initially decided that 4 air conditioners will be installed but later only 3 air conditioners and a fan were installed. If the cost of a fan is $1 / 10$ of the cost of an air conditioner, what was the total cost incurred?
(a) Rs. 1,29,400
(b) Rs. 1,24,500
(c) Rs. 1,25,550
(d) Rs. 1,24,350
(e) Rs. 1,25,600

Directions for 11 to 15: The percentage of revenue that come from the four different product segments for a diversified manufacturing company are shown in the following pie-chart Figures pertaining to the year 2008 and 2010 are given on the right hand side. The total sales in the year 2008 were Rs. 120 crores. It was Rs. 195 crores in 2010.
(1) Textile
(2) Cement
(3) Soda
(4)Others
(5) Cannot be determined
12. Which of the following statements is correct about the company?
(1) The company is putting less focus on the 'other' segment.
(2) Cement segment has registered more percentage growth than the textile segment.
(3) The soda segment has registered a 7\% growth per annum during the above two year period.
(4)Both(2)and(3)
(5) None of these
year 2008

year 2010



Others
-Cement
-Textile
$\square$ Soda
(1) $-9.86 \%$
(2) $-9.37 \%$
(3) $12.34 \%$
(4)-18.75\%
(5) None of these
14. If the textile segment continues the current trend in growth rate, then how much sales will company generate from textile segment in the year 2012? Choose the answer that is closest to the correct answer.
(1) Rs. 139 Crores
(2) Rs. 126 Crores
(3) Rs. 146 Crores
(4)Rs.109Crores
(5) None of these
(1) $134 \%$
(2) $34 \%$
(3) $52.9 \%$
(4)67\%
(5) None of these

## Solutions:

S1. Ans.(d)
Sol. Let the marks required be x . Then, $(62+35+\mathrm{x})=35 \%$ of $(150+150+$ 180)
$\Leftrightarrow 97+\mathrm{x}=35 / 100 \times 480 \Leftrightarrow \mathrm{x}=168-97=71$.

$\therefore$ Marked price $=331 / 3 \%$ above C.P.
S3. Ans.(d)
Sol. Prime numbers 2, 3, 5, 7, 11, 13 are to be added successively. So 165 is wrong.

S4.
S . Ans.(b)
Sol. Suppose gold and copper are taken in the ratio $x$ and $y$, then
$\frac{19 x+9 y}{x+y}=12$
$\Rightarrow 19 \mathrm{x}+9 \mathrm{y}=12 \mathrm{x}+12 \mathrm{y}$
$\Rightarrow 7 x=3 y$ or $x: y=3: 7$.

S5.
S .Ans.(c)
Sol. Let Rajan's present age be x years.
Then, his age at the time of marriage $=(x-8)$ years.
$\therefore x=\frac{6}{5}(x-8) \Rightarrow 5 x=6 x-48 \Rightarrow x=48$.
Since difference of the ages remains constant,
thus, age of Rajan's sister will be $48-10=38$ years.

## (6-10)

Cost of Table - 13500
Cost of Chair - 8100
Cost of AC - 40500
Cost of Monitor - 9720
Cost of CPU - 15000
Cost of Keyboard - 4000
Cost of Mouse - 1000
S6. Ans.(c)
Sol. Total Cost $=13500+(2 * 8100)=29700$

## S7. Ans.(c)

Sol. Required ratio

> Cost of a CPU

$$
\begin{aligned}
& =\overline{\text { Cost of a (Mouse }+ \text { Keyboard) }} \\
& =\frac{15000}{1000+4000}=\frac{15000}{5000}=3: 1
\end{aligned}
$$

## S8. Ans.(d)

Sol. Cost of a keyboard $=4000 \times \frac{120}{100}$
=Rs. 4800
Cost of a mouse $=1000 \times \frac{115}{100}=$ Rs. 1150
$\therefore$ Cost of a desktop $=$ Cost of (Monitor + CPU + Keyboard +
$=9720+15000+4800+1150$
$=$ Rs. 30670

S9. Ans.(e)
Sol. Total cost $=13500+8100+1000+4000+9720+15000=$ Rs. 51320
S10. Ans.(c)
Sol. Cost of a fan $=40500 \times \frac{1}{10}=4050$
Now, cost of 3 air conditioners +1 fan
$=3 \times 40500+4050=121500+4050$
$=$ Rs. 125550

S11.
(2) Visual question Cement has increased from $25 \%$ to $36 \%$ which is the maximum even if we don't take the increase in sales into account.

S12.
. (4) Checking statement (2) is clearly true as cement increases from $25 \%$ to $36 \%$ Growth in Soda
segment.
$=\frac{\frac{25}{100} \times 195-\frac{31}{100} \times 120}{\frac{31}{100} \times 120} \times 100=31 \%$ for 2 years
$=15.5 \%$ per annum
S. 13
(2) Revenue of others in 2008

$$
\frac{16}{100} \times 120=19.2
$$

Revenue of others in 2010
$=\frac{8}{100} \times 195=15.6$
Percent Growth $=\frac{15.6-19.2}{19.2} \times 100=-18.75 \%$
Annual percentage growth $=\frac{-18.75}{2}=-9.375 \%$
S. 14
(4) Growth in Textile from 2008 to 2010 $=\frac{\frac{31}{100} \times 195-\frac{28}{100} \times 120}{\frac{28}{100} \times 120} \times 100=80 \%$ For 2 years Revenue in $2010=\frac{31}{100} \times 195=60.45$
$\therefore$ Revenue in $2012=60.45\left(1+\frac{80}{100}\right)=108.81$

$$
=109 \text { crore } .
$$

(4) Percent growth in cement from 2008 to 2010
$=\frac{\frac{36}{100} \times 195-\frac{25}{100} \times 120}{\frac{25}{100} \times 120} \times 100=134 \%$ for 2 years
So, $67 \%$ per annum.

