

Answers with Hints

1. (B) $\because 5083 + \frac{25}{100}$ of ? + 289
 $= 6385.5$
 $\Rightarrow 0.25 \times ? = 6385.5 - 5083 - 289$
 $\therefore ? = \frac{1013.5}{0.25}$
 $= 4054$

2. (A) ? = $383 \div 25 \times 2.5 + 12$
 $= \frac{383}{25} \times 2.5 + 12$
 $= 50.30$

3. (D) ? = $\frac{4.5}{100}$ of 800 + $\frac{0.5}{100}$ of 640
 $= 36 \div 3 - 2 = 11.25$

4. (E) $\because \sqrt[3]{12167} \times \sqrt{?} = 621$
 $\Rightarrow 23 \times \sqrt{?} = 621$
 $\Rightarrow \sqrt{?} = \frac{621}{23} = 27$
 $\therefore ? = (27)^2$
 $= 729$

5. (A) $(5967 - 2437 - 1910) \div ? = 27$
 $\therefore \frac{1620}{?} = 27$
 $\therefore ? = \frac{1620}{27} = 60$

6. (C)

50	←	$\times 1.20$
60	←	$\times 1.25$
75	←	$\times 1.30$
97.5	←	$\times 1.35$
? = 131.625	←	$\times 1.40$
184.275	←	$\times 1.45$
267.19875	←	

$? = 97.5 \times 1.35$
 $= 131.625$

7. (C)

12	←	$\times 1 + 3$
15	←	$\times 2 + 6$
36	←	$\times 3 + 9$
117 ?	←	$\times 4 + 12$
480	←	$\times 5 + 15$
2415	←	$\times 6 + 18$
14508	←	

8. (B)

1	←	$\times 1 + 1$
2	←	$\times 2 + 2$
6	←	$\times 3 + 3$
21	←	$\times 4 + 4$
88	←	$\times 5 + 5$
445	←	$\times 6 + 6$
2676 ?	←	

9. (D)

20	←	$+(1)^2$
21	←	$+(2)^2$
25	←	$+(3)^2$
34	←	$+(4)^2$
50	←	$+(5)^2$
75 ?	←	$+(6)^2$
111	←	

10. (E)

600	←	-475	$\times \frac{1}{5}$
125	←	-95	$\times \frac{1}{5}$
30	←	-19	$\times \frac{1}{5}$
11 ?	←	-3.8	$\times \frac{1}{5}$
7.2	←	-0.76	$\times \frac{1}{5}$
6.44	←	-0.152	$\times \frac{1}{5}$
6.288	←		

For Q. 11 to 13 :

Annual income of Mr. Z
 $=$ lakhs
 \therefore Monthly income of Mr. Z

Monthly saving of Mr. Z
 $= \frac{106250}{5}$

Remaining amount of his monthly income
 $= 106250 - 21250$
 $= 85000$

Expenditure in paying loan instalment
 $= 85000 \times \frac{15}{100}$
 $= 712750$

\therefore Expenditure in paying various bills
 $= 106250 \times \frac{24}{100}$

\therefore Expenditure on various other household expenses
 $= 106250 \times \frac{42}{100}$

and amount sent to his family
 $= 106250 - (91375 + 12750)$
 $= 106250 - 104125$
 $= 2125$

11. (A) Req'd. sum = $2125 + 44625$
 $= 46750$

12. (E) Annual amount of paying his loan instalment
 $= 12750 \times 12$

13. (D) Req'd. % = $\frac{2125 \times 100}{21250} \%$
 $= 10\%$

14. (A) Req'd. ways
 $= {}^6P_6 = \underline{6}$
 $= 6 \times 5 \times 4 \times 3 \times 2 \times 1$
 $= 720$

15. (B) Speed of bus = $60 \times \frac{1}{1.5}$
 40 km/hr.

Difference in the time taken by both Bus and Car

$= \frac{720}{40} - \frac{720}{60}$
 $= 18 - 12$
 $= 6 \text{ hours}$

16. (D) Average number of female teachers
 $= \frac{125 + 105 + 120 + 80 + 100}{5}$
 $= \frac{530}{5} = 106$

17. (D) Req'd. number
 $= 175 \times \frac{68}{100} + 180 \times \frac{55}{100}$
 $= 119 + 99 = 218$

$$\begin{aligned}
 18. \text{ (A) Reqd. ratio} &= \left(320 \times \frac{35}{100}\right) : \left(80 \times \frac{20}{100}\right) \\
 &= 112:16 \\
 &= 7:1
 \end{aligned}$$

$$\begin{aligned}
 19. \text{ (E) Reqd. difference} &= \left(100 \times \frac{35}{100}\right) - \left(290 \times \frac{70}{100}\right) \\
 &= 35 - 203 \\
 &= 168
 \end{aligned}$$

$$\begin{aligned}
 20. \text{ (C) Reqd. \%} &= \left(250 \times \frac{74}{100} + 105 \times \frac{40}{100}\right) \\
 &\quad \times \frac{100}{355} \% \\
 &= \frac{(18500 + 4200)}{355} \% \\
 &= \frac{22700}{355} \% \\
 &= 63.94\% \\
 &= 64\% \text{ (App.)}
 \end{aligned}$$

$$\begin{aligned}
 21. \text{ (B) Reqd. ratio} &= 350 : 250 \\
 &= 7 : 5 \\
 \text{Total no. of workers in org. A} &= (150 + 75 + 300 + 225 + 325 \\
 &\quad + 350) \\
 &= 1425
 \end{aligned}$$

$$\begin{aligned}
 22. \text{ (A) Reqd. \%} &= \frac{75 \times 100}{1425} \% \\
 &= 5.26\% \\
 &\approx 5\%
 \end{aligned}$$

$$\begin{aligned}
 23. \text{ (E) Required number} &= (200 + 225 + 250 + 300 + 350 \\
 &\quad + 250) \\
 &= 1575
 \end{aligned}$$

$$\begin{aligned}
 24. \text{ (C) Reqd. difference} &= (150 + 75 + 300) - (300 + 350 \\
 &\quad + 250) \\
 &= 525 - 900 \\
 &= 375
 \end{aligned}$$

$$\begin{aligned}
 25. \text{ (B) Reqd. number} &= 350 \times \frac{120}{100} + 325 \\
 &= 420 + 325 \\
 &= 745
 \end{aligned}$$

$$\begin{aligned}
 26. \text{ (C) From I, the circumference of} & \\
 \text{the circle} &= \frac{22}{7} \times 21 \\
 &= 66 \text{ cm.}
 \end{aligned}$$

$$\begin{aligned}
 \text{From II, } r &= \sqrt{\frac{346.5 \times 7}{22}} \\
 &= \sqrt{110.25} \\
 &= 10.5 \text{ cm.}
 \end{aligned}$$

$$\begin{aligned}
 \therefore \text{ From II, the circumference of} & \\
 \text{the circle} &= \frac{22}{7} \times 2 \times 10.5 \\
 &= 66 \text{ cm.}
 \end{aligned}$$

27. (D) Data in both I and II are not sufficient to answer the question.

$$\begin{aligned}
 28. \text{ (E) From I and II together, number} & \\
 \text{of cut pieces} &= \frac{900 - 20}{80} = 11
 \end{aligned}$$

$$\begin{aligned}
 29. \text{ (E) From I and II together, S. P.} & \\
 \text{of the wrist watch} &= 6400 \times \frac{125}{100} \\
 &= \text{Rs. } 8000
 \end{aligned}$$

$$\begin{aligned}
 30. \text{ (E) From I, Possible two digit} & \\
 \text{number} &= 60, 15, 51, 24, 42 \text{ and } 33 \\
 \text{From II, Required two digit no.} & \\
 &= 42
 \end{aligned}$$

$$\begin{aligned}
 31. \text{ (C) ?} &= \frac{3.5 \times 1.35 \times 4.5}{0.5} \\
 &\approx \frac{3.5 \times 1.4 \times 4.5}{0.5} \\
 &= \frac{22.05}{0.5} \\
 &\approx 40 \text{ (App.)}
 \end{aligned}$$

$$\begin{aligned}
 32. \text{ (D) } \therefore 12 &= \frac{(128.4 + 11.101 + 35.025)}{?} \\
 \therefore ? &\approx \frac{128 + 11 + 35}{12} \\
 &= \frac{174}{12} = 14.5 \\
 &\approx 14 \text{ (App.)}
 \end{aligned}$$

$$\begin{aligned}
 33. \text{ (D) ?} &= 572 \div \sqrt{1755} \times 12 \\
 &= \frac{570}{42} \times 12 = 13.6 \times 12 \\
 &= 163.2 \approx 165
 \end{aligned}$$

$$\begin{aligned}
 34. \text{ (A) ?} &= \sqrt[3]{925} \div \sqrt[3]{350} \\
 &\approx \frac{30}{7} = 4.29 \\
 &\approx 4
 \end{aligned}$$

$$\begin{aligned}
 35. \text{ (B) ?} &= 12.36 \times 4.26 + 13.38 \\
 &\approx 12.4 \times 4.3 + 13 \\
 &\approx 53.3 + 13 \\
 &\approx 66 \text{ (App.)}
 \end{aligned}$$

Test Your Knowledge

Answers with Hints

- (B) 2. (D) 3. (D)
- (C) Ravi river merges with Chenab river near Multan in Pakistan.
- (A) 6. (B) 7. (A) 8. (C) 9. (B)
- (D)
- (B) Geet Govindam is an epic poem on the romance of Krishna and Radha written by Jayadev in the 11th century.
- (C)
- (B) Arti Pradhan became the first woman in the world to swim in 30 kilometre strait of Gibraltar on August 29, 1988.
- (A)
- (A) Levanter is a cold wind which blows in Southwestern Coast of Spain and France.
- (B) The first Indian Iron Steel Factory Bengal Iron works was founded in Kulti (West Bengal) in 1870.
- (B) 18. (C) 19. (B) 20. (B) 21. (B)
- (A)
- (D) According to Rousseau, the majority will and will of all are not general will as both the wills (majority will and will of all) may be based on self-interest and emotions whereas the general will is always based on general interest and is reasonable.
- (B) 25. (A) 26. (A) 27. (B) 28. (A)
- (B) After the death of Hyder Ali his son Tipu Sultan ascended the throne of Mysore in 1782.
- (C) 31. (A)
- (A) The eightfold path (Ash-tangika) of Buddhism includes Samyak Drishti, Samyak, Sankalp, Samyak Vani, Samyak Karma, Samyak Ajivika, Samyak Vyayam, Samyak Smiriti, and Samyak Samadhi.
- (B) 34. (B) 35. (D) 36. (A) 37. (C)
- (C) 39. (B) 40. (C)