

ANSWER SET - 42

01. (4) 02. (4) 03. (4) 04. (4) 05. (3)
 06. (3) 07. (3) 08. (3) 09. (2) 10. (3)
 11. (4) 12. (4) 13. (3) 14. (4) 15. (3)
 16. (4) 17. (4) 18. (2) 19. (1) 20. (3)
 21. (1) 22. (2) 23. (2) 24. (4) 25. (3)
 26. (2) 27. (1) 28. (2) 29. (4) 30. (4)
 31. (1) 32. (3) 33. (3) 34. (4) 35. (4)
 36. (3) 37. (3) 38. (1) 39. (4) 40. (3)
 41. (2) 42. (4) 43. (2) 44. (4) 45. (1)
 46. (1) 47. (3) 48. (2) 49. (4) 50. (1)
 51. (1) 52. (1) 53. (2) 54. (3) 55. (1)
 56. (2) 57. (1) 58. (1) 59. (2) 60. (2)
 61. (3) 62. (2) 63. (1) 64. (1) 65. (2)
 66. (2) 67. (4) 68. (1) 69. (4) 70. (4)
 71. (1) 72. (2) 73. (1) 74. (4) 75. (1)
 76. (1) 77. (1) 78. (3) 79. (3) 80. (2)
 81. (3) 82. (4) 83. (4) 84. (2) 85. (4)
 86. (1) 87. (2) 88. (1) 89. (4) 90. (4)
 91. (1) 92. (3) 93. (4) 94. (2) 95. (2)
 96. (4) 97. (4) 98. (4) 99. (3) 100. (3)

EXPLANATION - 42

- (4)

07	15	30	59	116			
+8		+15		+29		+57	
[8×2]-1		[15×2]-1		[29×2]-1			
- (4)

B	19	G	H	17	J	N	15	M	T	13	P
+6		+6		+6		+6		+6		-2	
-2		+3		+3		+3		+3		-2	
- (4) **Immune** is the antonym of **vulnerable**.
 Similarly, **superficial** is the antonym of **entrenched**.
- (4) **192941** : 233345 : 51119 : 91523
 $1+9+2+9+4+1 \Rightarrow 26=8 \Rightarrow 2+6=8$
 $2+3+3+3+4+5 \Rightarrow 20 \Rightarrow 2+0=2$
 $5+1+1+1+9 \Rightarrow 17 \Rightarrow 1+7=8$
 $9+1+5+2+3 \Rightarrow 20 \Rightarrow 2+0=2$
 So, $8 : 2 :: 8 : 2$
- (3) Let the age of A = x years
 Then the age of A and R will be $\frac{2}{3}x$ and $\frac{4}{3}x$ respectively.
 $\frac{2}{3}x + x + \frac{4}{3}x = 108 = 36$ years
- (3) (1) $523 \Rightarrow 5+2+3=10$
 (2) $118 \Rightarrow 1+1+8=10$
 (3) $272 \Rightarrow 2+7+2=11$
 (4) $235 \Rightarrow 2+3+5=10$
- (3) Except option (3), all are related to the electronic media.
- (3) (1) $(9-2)^3 + 2 = 345$
 (2) $(7-4)^3 + 2 = 29$
 (3) $(8-4)^3 + 3 = 67$
 (4) $(6-1)^3 + 2 = 127$
- (2)

ASBESTOSASCEND	
5 1	

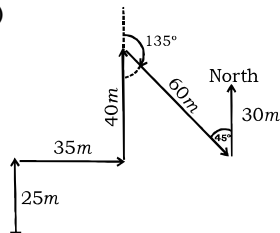
ASCESESASCETIC

2 4

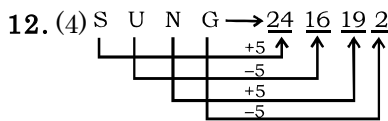
ASCOTS

3

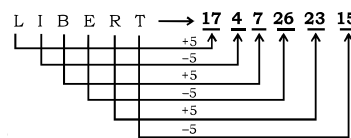
10. (3)



11. (4) $26 + 13 = 19 + 20$
 $61 + 54 = 46 + 69$
 Similarly
 $15 + x = 6 + 17$
 $15 + x = 23$
 $\therefore x = 23 - 15 = 8$



Similarly,



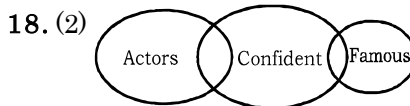
13. (3) how often you come - Ja ha ta na (i)
 how do you read - Sa ma ha ta (ii)
 According to equation (i)
 Often = Ja or na
14. (4) $3 \times 6 \times 5 \times 2 = 180$
 $2 \times 8 \times 1 \times 7 = 112$
 $3 \times 3 \times 4 \times 3 = 108$
 Similarly
 $2 \times 9 \times 4 \times 2 = 144$
15. (3)
 1,3,8,5,7,2,9,8,5,7,6,3,4,7,9,4,7,6,5,8,5,3

16. (4)

Prewriting	Writing
2 3	

Revising	Editing	Publishing
4 1 5		

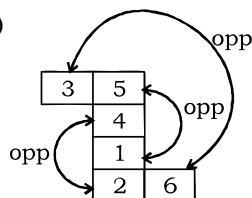
17. (4) AABC/ABBC/ABCC/AABC



Conclusions: I. $\sqrt{}$
 II. \times

19. (1) 97

20. (3)



21. (1)

22. (2)

23. (2)

24. (4)

25. (3) S - 56, 68, 85, 97
 H - 01, 14, 20, 33, 42
 R - 00, 13, 22, 31, 40, 44
 I - 04, 10, 23, 32, 41

26. (2) $x + \frac{1}{x} = \sqrt{3}$

cubing both sides —

$$x^3 + \frac{1}{x^3} + 3\left(x + \frac{1}{x}\right) = 3\sqrt{3}$$

$$x^3 + \frac{1}{x^3} + 3\sqrt{3} = 3\sqrt{3}$$

$$x^6 + 1 = 0$$

$$x^{217} + x^{211} + x^{151} + x^{145} + x^{37} + x^{31} + 1 = x^{211}(x^6 + 1) + x^{145}(x^6 + 1) + x^{31}(x^6 + 1) + 1 = 0 + 0 + 0 + 1 = 1$$

27. (1) Weight of the teacher = $25 \times 34 - 24 \times 32 = 850 - 768 = 82$ kg

28. (2) $(2 + \sqrt{2}) + \frac{1}{(2 + \sqrt{2})} + \frac{1}{(\sqrt{2} - 2)}$

$$= (2 + \sqrt{2}) + \frac{2 - \sqrt{2} - (2 + \sqrt{2})}{4 - 2}$$

$$= (2 + \sqrt{2}) - \frac{2\sqrt{2}}{2}$$

$$= 2 + \sqrt{2} - \sqrt{2} = 2$$

29. (4) Part of the tank filled in 4 hours = $\frac{4}{12} = \frac{1}{3}$

Remaining part = $1 - \frac{1}{3} = \frac{2}{3}$

$\frac{2}{3}$ part is filled by A & B in 14 hours

$$\therefore 1 \text{ part is filled by A \& B in } 14 \times \frac{3}{2} = 21 \text{ hrs}$$

Time taken by C alone to fill the tank

$$= \frac{1}{\frac{1}{12} - \frac{1}{21}} = \frac{1}{\frac{7-4}{84}} = 28 \text{ hours}$$

31. (1) Let the monthly income of Mr. Yadav = ₹ 100
 expense on electricity = 60% of 100 = ₹ 60
 expense on clothes & transportation = 50% of (100 - 60)

$$= \frac{50}{100} \times 40 = ₹ 20$$

$$\therefore \text{Saving} = 40 - 20 = ₹ 20$$

\Rightarrow Expense on clothes & transportation

$$= \text{saving} = ₹ 20$$

\therefore Monthly expense on clothes &

$$\text{transportation} = \frac{484560}{12}$$

$$= ₹ 40380$$

32. (3) Price of the watch after 1st discount

$$= 90\% \text{ of } 720$$

$$= ₹ 648$$

$$2\text{nd discount} = 648 - 550.80$$

$$= ₹ 97.20$$

$$\therefore \% \text{ discount} = \frac{97.20}{648} \times 100 = 15\%$$

33. (3) Total CP of two radios

$$= \frac{250 \times 100}{125} + \frac{250 \times 100}{80}$$

$$= 2000 + 3125 = ₹ 5125$$

36. (3) Let two parts of the sum be ₹ x & ₹ y.

Then,

$$6x + 15y = 8(x + y)$$

$$15y - 8y = 8x - 6x$$

$$\frac{7}{2} = \frac{x}{y}$$

$$\Rightarrow x : y = 7 : 2$$

37. (3) $PT^2 = PA \cdot PB$

$$= PA \cdot (PA + AB)$$

$$25 = 4 \cdot (4 + x)$$

$$\Rightarrow \frac{25}{4} - 4 = x \Rightarrow x = 2.25$$

38. (1) Remaining day = $9 - 6 = 3$

$$12 \times 3 = (12 + 6) \times d_2$$

$$\Rightarrow d_2 = \frac{12 \times 3}{18} = 2 \text{ days}$$

39. (4) $\left(1 + \frac{5}{6} + \frac{7}{8} + \frac{11}{12}\right) \div \left(\frac{3}{4} - \frac{5}{8}\right)$

$$= \left(\frac{24 + 20 + 21 + 22}{24}\right) \div \left(\frac{12 - 10}{16}\right)$$

$$= \frac{87}{24} \times \frac{16}{2} = 29$$

40. (3) Distance covered in 50 minutes.

$$= 48 \times \frac{50}{60} = 40 \text{ km}$$

Speed of the train (when same distance is covered in 40 min)

$$= \frac{40}{\frac{40}{60}} = 60 \text{ km/hr}$$

41. (2) Speed of the stream = x km/hr
(say) Speed of the boat = 3x km/hr
Speed upstream = $(3x - x)$ km/hr

$$= 2x \text{ km/hr}$$

ATQ,

$$2x = \frac{48}{6} = 8$$

$$x = 4 \text{ km/hr}$$

Speed of boat in still water

$$= 3x \text{ km/hr} = 3 \times 4 = 12 \text{ km/hr}$$

42. (4) Area of the rectangular park = $72 \times 48 = 3456 \text{ m}^2$

Required Area

$$= 3456 - (72 \times 2 + 48 \times 2 - 2 \times 2)$$

$$= 3456 - (144 + 96 - 4)$$

$$= 3456 - (240 - 4) = 3456 - 236$$

$$= 3220 \text{ m}^2$$

43. (2) Volume of the earth taken out = $\pi \times 5^2 \times 14 \text{ m}^3$

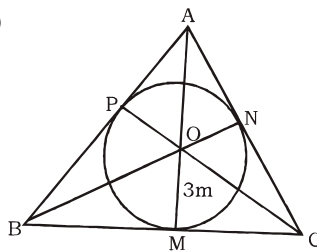
$$\text{Area of the platform} = \pi(r_o^2 - r_i^2)$$

$$= \pi(10^2 - 5^2) = 75\pi \text{ m}^2$$

Height of the platform

$$= \frac{\pi \times 25 \times 14}{75\pi} = 4.7 \text{ m (approx.)}$$

44. (4)



Area of the base of the prism

$$= \frac{1}{2} \times BC \times OM + \frac{1}{2} \times AC \times ON +$$

$$\frac{1}{2} \times AB \times OP$$

$$= \frac{1}{2} \times 3 \times BC + \frac{1}{2} \times 3 \times AC + \frac{1}{2} \times 3 \times AB$$

$$= \frac{3}{2} (\text{Perimeter of } \triangle ABC)$$

$$= \frac{3}{2} \times 15 = \frac{45}{2} \text{ sq.cm}$$

\therefore Height of the prism

$$= \frac{\text{Volume of the prism}}{\text{Area of its base}}$$

$$= \frac{270}{\frac{45}{2}} = 12 \text{ cm}$$

45. (1) $\therefore AB \parallel CD$

$$\Rightarrow \angle AEC = \angle ECD = 37^\circ$$

(alt. interior angles) In $\triangle CDE$

$$90^\circ + 37^\circ + x^\circ = 180^\circ$$

$$x^\circ = 180^\circ - 127^\circ = 53^\circ$$

$$46. (1) \cot 18^\circ \left[\cot 72^\circ \cos^2 22^\circ + \frac{1}{\tan 72^\circ \sec^2 68^\circ} \right]$$

$$\cot 18^\circ [\cot 72^\circ \cos^2 22^\circ + \cot 72^\circ \cos^2 68^\circ]$$

$$\cot 18^\circ [\cot 72^\circ (\cos^2 22^\circ + \cos^2 68^\circ)]$$

$$\cot 18^\circ [\cot 72^\circ (\cos^2 22^\circ + \sin^2 22^\circ)]$$

$$= \cot 18^\circ \cdot \cot 72^\circ \times 1$$

$$= \cot 18^\circ \times \tan 18^\circ = 1$$

47. (3) $7\sin^2 \theta + 3\cos^2 \theta = 4$

$$4\sin^2 \theta + 3\sin^2 \theta + 3\cos^2 \theta = 4$$

$$4\sin^2 \theta = 1$$

$$\sin^2 \theta = \frac{1}{4}$$

$$\sin \theta = \frac{1}{2} = \sin \frac{\pi}{6}$$

$$\theta = \frac{\pi}{6}$$

48. (2) Required %

$$= 140000 \times \frac{100 + 20}{100}$$

$$= 168000$$

49. (4) Required answer

$$= \left(5 \times \frac{140}{100}\right) : \left(3 \times \frac{120}{100}\right)$$

$$= (5 \times 14) : (3 \times 12)$$

$$= 35 : 18$$

50. (1) Suppose 100 Black & White TVs were sold in 2007

$$\therefore \text{Black \& White TVs sold in 2008} = 118$$

\therefore Required no of TV sets

$$= \frac{118}{18} \times 4140 = 27140$$

84. (2) 'Film had begun' should replace the underlined part. Past Perfect Tense (subject + had + V_3) is used when a sentence refers to two past actions and one of them occurs earlier than the other.

85. (4) 'lay' should come in place of the underlined part. 'Lay' is the past tense for 'Lie' which means to be or place oneself at rest in a flat, horizontal position. 'Lain' is the past participle form of lie. 'Laid' is the past form of 'Lay' which means to produce.

87. (2) 'To bear the palm' means 'to be victorious'. So, (2) is the correct answer.

88. (1) 'To cut (one's) teeth on' means 'to get one's first experience in a particular job by doing something'. So, (1) is the correct answer.