

# ANSWER SET - 16

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

## EXPLANATION - 16

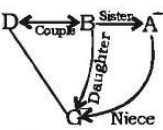
1. (3) First is the Antonym of second
2. (1)  $2 \times 3 \times 4 = 24$ ,  $3 \times 2 \times 5 = 30$
3. (1)  $7 + 2 + 3 = 12 \Rightarrow 1 + 2 = 3$   
 $8 + 2 + 4 = 14 \Rightarrow 1 + 4 = 5$
4. (2) 

S	R	T	K
↓ +1			
T	S	U	L

M	O	P	S
↓ +1			
N	P	Q	T
5. (4) Temple, Mosque and Gurudwara are places to Worship.
6. (3) Except (28,54), others are multiple of 8
7. (4) 

A	B	C	E
↓ +1			
D	E	F	H

M	N	O	Q
↓ +1			
P	O	R	U
8. (2) Except 'O', all are vowels.
9. (3) MINISTER (letter E not present)

10. (3) 

So, 'G' is the niece of 'A'.
11. (2)  $4 \times 8 = 32$   
 $6 \times 3 = 18$   
 $5 \times 4 = 20$
12. (2)  $4 \times 6 + 5 = 29$   
 $3 \times 5 + 3 = 18$   
 $2 \times 6 + 4 = 16$
13. (3)  $12 + 24 + 36 = 18 + 30 + 24 = 72$   
 $19 + 13 + 40 = 72$
14. (4)
15. (3) 

R	A	T	F	O	G
↓ +3					
U	C	V	I	Q	I

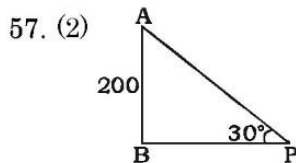
16. (1) 

3	6	9	18	36	42	48
↓ +3						
6	9	18	36	42	48	
↓ +3						
18	36	42	48			
↓ +2						
36	42	48				
↓ +2						
42	48					
↓ +6						
48						

$$17. (4) \begin{matrix} 12 & 24 & 72 & 288 & 1440 \\ \times 2 & \times 3 & \times 4 & \times 5 \end{matrix}$$

18. (3) NEAR → NEAT → NECK  
→ NEED → NEST
19. (3) R > G > M > S or R > M > G > S  
So, Ram is the oldest among them.
20. (4)  $I = 9 \Rightarrow 9 \times 2 = 18$   
 $G = 7 \Rightarrow 7 \times 2 = 14$   
 $B + E + D = 2 \times 2 + 2 \times 5 + 2 \times 4 = 4 + 10 + 8 = 22$
22. (2) Average Speed  
 $= \frac{2 \times 30 \times 20}{30 + 20} = 24 \text{ km/hr}$
23. (2) 8 A 8 B 8 C 8 =  $8 + 8 - 8 \times 8 = 8 + 8 - 64 = -48$   
Hence, option (2) is correct.

24. (4)
25. (2)
55. (4) Meal for 200 children = Meal for 120 men  
 $\Rightarrow$  Meal for 150 children  
 $= \text{Meal for } \frac{120 \times 150}{200} \text{ men}$   
 $= \text{Meal for 90 men}$   
 $\therefore$  Required number of men =  $120 - 90 = 30 \text{ men}$
56. (2) Sum of decimal place =  $3 + 4 = 7$   
As  $5 \times 8 = 40$  (digit at extreme right)  
So, we have 6 significant digits to the right of decimal point



$$\tan 30^\circ = \frac{AB}{BP}$$

$$\Rightarrow \frac{1}{\sqrt{3}} = \frac{200}{BP}$$

$$\Rightarrow BP = 200\sqrt{3}$$

$\therefore$  Required distance =  $200\sqrt{3} = 1.732 \times 200 = 346.4 \text{ m}$

59. (3) Let the profit be x  
As, 5% is for charity, so rest 95% is divided between A and B in the ratio 3 : 2

A's profit =  $0.95x \times \frac{3}{5}$   
ATQ,

$$0.95x \times \frac{3}{5} = 855$$

$$\Rightarrow x = \frac{855 \times 5}{0.95 \times 3} = 1500$$

$$\Rightarrow \text{Total Profit} = ₹ 1500$$

61. (2) Required time =  $\frac{12 \times 24}{12 + 24} = \frac{12 \times 24}{36} = 8 \text{ minute}$
62. (2) Required Profit  
 $= \left( \frac{100 \times 48}{12 \times 350} - 1 \right) \times 100 = \frac{1}{7} \times 100 = 14 \frac{2}{7} \%$
63. (3) Let the required number of years be x  
ATQ,

$$\frac{150 \times 6 \times x}{100} = \frac{800 \times \frac{9}{2} \times 2}{100}$$

$$\Rightarrow x = \frac{800 \times 9}{150 \times 6} = 8$$

$\therefore$  Required number of years = 8

65. (1)  $7^{x-y} = 343 = 7^3$   
 $\Rightarrow x - y = 3$  ———(1)  
Also,  $7^{x+y} = 16807 = 7^5$   
 $\Rightarrow x + y = 5$  ———(2)  
From equation (1) and (2)  
 $x = 4$   
 $\therefore$  Required value of x = 4
66. (4) Distance travelled in 1st hr = 35 km  
Distance travelled in 2nd hr =  $35 + 2 = 37 \text{ km}$   
Distance travelled in 3rd hr = 39 km  
 $\therefore$  Total distance travelled in 12 hr  
 $= (35 + 37 + 39 + \dots (12\text{th hr}))$   
 $= \frac{12}{2} (2 \times 35 + 2 (12 - 1)) = 6 (70 + 22) = 552 \text{ kms.}$

67. (3) Let a and b be the work done by a man and a woman in 1 day respectively

$$6a + 8b = \frac{1}{10}$$

$$\Rightarrow 60a + 80b = 1 \text{ ———(i)}$$

Also,  $26a + 48b = \frac{1}{2}$

$$\Rightarrow 52a + 96b = 1 \text{ ———(ii)}$$

From (i) and (ii) we have,

$$a = \frac{1}{100} \text{ and } b = \frac{1}{200}$$

So, work done by 15 men and 20

$$\text{women} = \frac{15}{100} + \frac{20}{200} = \frac{1}{4}$$

∴ Required time = **4 days.**

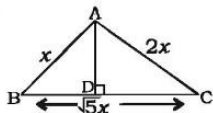
69. (2) By using componendo and dividendo,

$$\frac{2 \sin \theta}{2 \cos \theta} = \frac{5+4}{5-4}$$

$$\Rightarrow \tan \theta = 9$$

$$\therefore \frac{\tan^2 \theta + 1}{\tan^2 \theta - 1} = \frac{9^2 + 1}{9^2 - 1} = \frac{82}{80} = \frac{41}{40}$$

71. (1)



In  $\triangle ABC$ ,

$$BC^2 = AB^2 + AC^2$$

$$\Rightarrow BC^2 = x^2 + (2x)^2$$

$$\Rightarrow BC = \sqrt{5}x$$

$$\text{Now, } BD = \frac{AB^2}{BC}$$

$$\Rightarrow BD = \frac{x^2}{\sqrt{5}x} = \frac{x}{\sqrt{5}}$$

$$\Rightarrow BD = \frac{AB}{\sqrt{5}}$$

72. (1)  $x + \frac{1}{2x} = 2$

$$\Rightarrow 2\left(x + \frac{1}{2x}\right) = 4$$

$$\Rightarrow 2x + \frac{1}{x} = 4$$

$$\Rightarrow 8x^3 + \frac{1}{x^3} + 3 \cdot 2x \cdot \frac{1}{x} \left(2x + \frac{1}{x}\right) = 64$$

$$\Rightarrow 8x^3 + \frac{1}{x^3} + 6 \times 4 = 64$$

$$\Rightarrow 8x^3 + \frac{1}{x^3} = 40$$

73. (2) Required difference =  $(35 - 33)\%$  of 250000

$$= \frac{2}{100} \times 250000 = \mathbf{5000}$$

74. (3)  $8\% = 4000$

$$\Rightarrow 35\% = \frac{4000 \times 35}{8} = 17500$$

∴ Number of Literate males = **17500**

75. (4)  $100\% = 360^\circ$

$$\Rightarrow 1\% = \frac{360^\circ}{100}$$

$$\therefore 24\% = \frac{360^\circ}{100} \times 24 = 86.4^\circ$$

∴ Required angle =  **$86.4^\circ$**