

# ANSWER SET - 55

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

## EXPLANATION - 55

1. (2) 35 = THIRTY FIVE = 8 different letters  
58 = FIFTY EIGHT = 7 different letters
2. (2) EVIL LIVE  
1 2 3 4 4 3 2 1  
ROAR RAOR  
1 2 3 4 4 3 2 1
3. (1) Gandhi Jayanti is celebrated on 2nd October and **Republic day** is celebrated on 26 January.
4. (2)  $H_2SO_4$  is the chemical formula of Sulphuric acid and  $HNO_3$  is the chemical formula of Nitric acid.
5. (3) Except **Moral science**, other three comes under Social science.
6. (4) Except **DLCR**, we can find one vowel in rest of the options.
7. (4) **No. Factors (f) N(f)**  
24 1, 2, 3, 4, 6, 12, 24 7  
15 1, 3, 5, 15 4  
27 1, 3, 9, 27 4  
30 1, 2, 3, 5, 6, 15, 30 7  
4 8

8. (3)

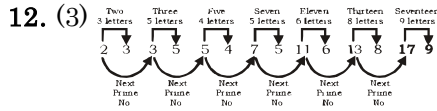
Words	Vowels used (No.)	(No.) <sup>2</sup>	No. of Letters	Result
January	AU (2)	2 <sup>2</sup> = 8	7	87
February	AEU (3)	3 <sup>2</sup> = 27	8	278
August	U (1)	1 <sup>2</sup> = 1	6	16 + 86
December	E (1)	1 <sup>2</sup> = 1	8	18

9. (2) **Words No. of vowels Result**  
ZILA GAZIABAD 6 6<sup>3</sup> - 6<sup>2</sup> = 216 - 36 = 180  
MUMBAI MIRROR 5 5<sup>3</sup> - 5<sup>2</sup> = 125 - 25 = 100
10. (3) After substituting the signs as per the given direction.  
(3C9)A (4B6) B6  
= (3 × 9) - (4 + 6) + 6  
= 27 - 10 + 6  
= 23
11. (1) 8 × 5 + 1 = 41  
41 × 4 + 2 = 166

$$166 \times 3 + 3 = 501$$

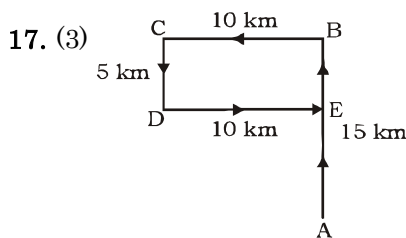
$$501 \times 2 + 4 = 1006$$

$$1006 \times 1 + 5 = 1111$$



13. (2) 8 + 6 = 14 ⇒ 14 + 003 ⇒ 143  
9 + 2 = 11 ⇒ 11 + 007 ⇒ 117  
3 + 5 = 8 ⇒ 8 + 002 ⇒ 82
14. (4) ab c/ a a bc/ a b b c/ ab c c

15. (3) I. ✗  
II. ✗  
III. ✓  
IV. ✗
16. (3) We can't find 'E' in the given word RIDICULOUS.



17. (3) Finally, Akhilesh is in the **North** of his house.
18. (1) 12 ⇒ 12<sup>3</sup> = 1728 ⇒ 12<sup>2</sup> = 144  
09 ⇒ 09<sup>3</sup> = 0729 ⇒ 09<sup>2</sup> = 081  
13 ⇒ 13<sup>3</sup> = 2197 ⇒ 13<sup>2</sup> = 169
19. (1) (3 × 5)<sup>2</sup> = 15<sup>2</sup> = 225  
(2 × 4)<sup>3</sup> = 8<sup>3</sup> = 512

$$(9 \times 4)^{1.5} = (36)^{\frac{3}{2}} = (6)^{2 \times \frac{3}{2}} = 6^3 = 216$$

20. (2) Only daughter of my mother = Kamal's Sister  
Kamal's Sister is Jitendra's Mother  
So Kamal is **maternal uncle** of Jitendra as well as his sister.

Top	6/3	1	4
Bottom	6	2	5

The digit on the top of the surface will be 3, when the digit at the bottom is 6.

22. (3) 5 × 6 + 3 = 8 × 5 - 7
23. (1) 3 + 4 × 6 - 4 × 5 = 7
24. (4)

51. (4) 2M = 5W = 7B  
Let the required no. of days = x  
2M × 469 = (7 + 2 +  $\frac{4}{7}$ )M × x  
x =  $\frac{2 \times 469 \times 7}{49 + 14 + 4} = 98$  days  
∴ Required no. of days = 98
52. (3) Speed = 4 : 3  
Time = 3 : 4

Difference for 1 unit = Time difference 2 hr  
Hence normal time = 3 × 2 = 6 hr

53. (3) 2<sup>39</sup> = ((2)<sup>3</sup>)<sup>13</sup> = 8<sup>13</sup>  
Now, Rem  $\frac{8^1}{39} = 8$ ,  
Rem  $\frac{8^2}{39} = 25$ ,  
Rem  $\frac{8^3}{39} = 5$ ,  
Rem  $\frac{8^4}{39} = 1$  &  
Rem  $\frac{8^5}{39} = 8$

So, the pattern is 8, 25, 5, 1.  
∴ 8 will be the 13th term as per the pattern.

54. (1) Let price of article be ₹ 100, then  
Markup price = 180  
Price after discount = 135  
Let trader gives 1000 gm  
C.P. 1000 × 100 = 900 × 100  
S.P. 900 × 135 =  $\frac{1000 \times 135}{45 \times 1000}$

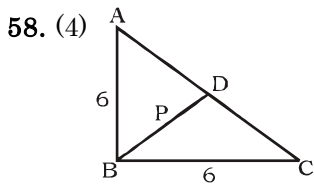
Hence % profit  
=  $\frac{45 \times 1000}{90 \times 1000} \times 100 = 50\%$

55. (1) Divisor = 48  
Quotient = 6  
Remainder = 12  
Dividend = Divisor × Quotient + Remainder  
= 48 × 6 + 12 = 300
56. (2) Difference of C.I. for 2 years = 756 - 720 = 36  
Hence ₹ 36 will be the interest on ₹ 360.  
[∴ SI for 2 yrs = ₹ 720]

then  $\frac{36 \times 100}{360} = R$  ∴ R = 10%  
now,  
if r = t, SI = 900

then, 900 =  $\frac{3600 \times r \times t}{100}$   
⇒ r<sup>2</sup> = 25 ⇒ r = 5%  
∴ Required rate = 5%

57. (3) Time Work Capacity  
A + B  $\frac{23}{11}$  30  $\frac{23}{11}$  30  $\frac{23}{11}$  1  
(A + B)11 + 28A = 30  
A =  $\frac{19}{28}$   
Hence A will complete the work  
=  $\frac{30 \times 28}{19} = \frac{840}{19} = 44 \frac{4}{19}$  days



Let B be right angle in  $\Delta ABC$  and BD be perpendicular on hypotenuse AC

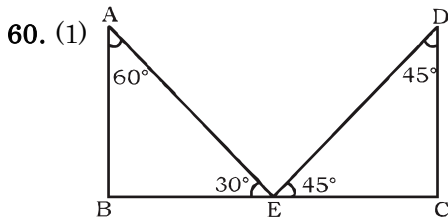
$$\text{then } \frac{1}{p^2} = \frac{1}{6^2} + \frac{1}{6^2}$$

$$p^2 = \frac{6^2}{2} \quad \Delta P = 3\sqrt{2} \text{ cm}$$

59. (4)  $A + B = 45^\circ$

$$\frac{\tan A + \tan B}{1 - \tan A \times \tan B} = 1$$

$$\tan A + \tan B + \tan A \tan B = 1$$



Let AB, CD are two towers  
E is the point between road BC

Then in  $\Delta DCE$   
 $DE = EC = x = AB$

In  $\Delta ABE$

$$BE = \sqrt{3} x \text{ then}$$

$$x = \frac{100}{(\sqrt{3}+1)} \times \frac{(\sqrt{3}-1)}{(\sqrt{3}-1)}$$

$$= \frac{100(\sqrt{3}-1)}{2}$$

$= 50(1.732 - 1) = 36.6 \text{ m} = AB$   
Position of farthest tower from point (BE)

$$= 36.6 \times \sqrt{3} = 63.4 \text{ m}$$

61. (2) CP of 12 orange = SP of 9 oranges  
 $CP : SP = 9 : 12 = 3 : 4$

$$\text{then, profit \%} = \frac{4-3}{3} \times 100$$

$$= 33.33\%$$

CP of 10 oranges = 3

SP of 10 oranges = 4

Profit on 10 oranges =  $4 - 3 = 1$

Discount on 10 oranges = Profit on 5 oranges = 0.5

$$\therefore \text{MP of 10 oranges} = 4 + 0.5 = 4.5$$

$$\text{Discount \%} = \frac{0.5 \times 100}{1.5} = 11.11$$

$$\therefore \text{Required diff.} = 33.33 - 11.11$$

$$= 22.22\%$$

62. (2) Let fixed expenses of a hotel be x and dependent expenses be y

$$10y + x = 6000 \quad \dots(i)$$

$$25y + x = 9000 \quad \dots(ii)$$

On solving,

$$15y = 3000$$

$$\therefore y = 200$$

$$\text{and } x = 4000$$

Hence total expenses of hotel when there are 40 guest in the hotel

$$= 4000 + 40 \times 200 = 4000 + 8000 = 12,000$$

63. (3) For  $N = 31$  and  $D = 17$ , it will give 14 as a remainder.

$\therefore 3N = 93$  and  $D = 17$ , it will give 8 as a remainder.

$\therefore 4N = 124$  and  $D = 17$ , it will give 5 as a remainder.

64. (2) The sum of square of 5 prime number will be even, when a number be even we know that 2 is an least even prime number. Hence  $a^5 = 2^5 = 32$

65. (4) Divisible by all numbers  
Number formed by reapeation of digit

$$= a \times 111111$$

$$= a \times 111 \times 1001$$

$$= a \times 3 \times 37 \times 11 \times 13 \times 7$$

Hence the no. will be divisible by 3, 7 and 11.

66. (3)

	R	S
Shot firing	$5 \times 8$	$7 \times 8$
Killed	$2 \times 8$	$3 \times 8$
Shot missed	$3 \times 8$	$4 \times 8$

$\therefore$  Number of birds killed by Remo =  $2 \times 8 = 16$

67. (4)  $P + Q = 560 \quad \dots(i)$

$$\frac{\frac{4}{7}P}{Q-100} = \frac{1}{4} \Rightarrow 16P = 7Q - 700$$

$$7Q - 16P = 700 \quad \dots(ii)$$

On solving equ. (i) and (ii)

$$7Q + 7P = 3920$$

$$7Q - 16P = 700$$

$$\hline \begin{array}{r} + \quad - \\ 23P = 3220 \end{array}$$

$$P = 140$$

$$\text{and } Q = 420$$

$\therefore$  Required number of trees in forest  $Q = 420$ .

68. (2)  $C + M = \frac{8}{17}$

$$M + G = \frac{12}{17}$$

$$C + M + G = 1$$

$$(C + M + M + G) - (C + M + G) = M$$

$$\left( \frac{8+12}{17} - 1 \right) = M \therefore M = \frac{3}{17}$$

$$C = \frac{5}{17}, G = \frac{9}{17}$$

$$C : M : G = 5 : 3 : 9$$

Hence amount to less efficient person

$$= 816 \times \frac{3}{17} = 48 \times 3 = 144$$

69. Let the first train meet the second x hrs after its start, then  $40x + (x - 2) \times 50 = 110$  (the 2nd train takes  $x - 2$  hrs. as the train starts two hours later than the 1st)

$$\text{or, } 90x = 110 + 100 = 210$$

$$\therefore x = \frac{210}{90} \text{ hrs} = \frac{7}{3} \text{ hrs} = 2\frac{1}{3} \text{ hrs}$$

$= 2 \text{ hrs } 20 \text{ min.} =$  Two trains meet at 10.20 a.m.

70. (1) Surface area of cube =  $6 \times (5)^2 = 150$

Surface area of cubiod =  $2(1 \times 1 + 1 \times 125 + 1 \times 125) = 502$

% increase in surface area

$$= \frac{502 - 150}{150} \times 100$$

$$= \frac{704}{3} = 234\frac{2}{3}\%$$

71. (2) Difference in price after 3 years

$$= 10 \times (1.2)^3 - 16 \times (0.75)^3$$

$$= 17.28 - 6.75 = 10.53 \text{ lakh}$$

$$= ₹ 1053000$$

72. (4) Let x m cloth is required

$$\frac{22}{7} \times 14 \times 50 = x \times 10$$

$$x = 220 \text{ m}$$

$\therefore$  The length of the cloth = 220 m

73. (3) Percentage decrease

$$= \left( \frac{6-5}{6} \times 100 \right) \%$$

$$= \frac{50}{3} \% = 16\frac{2}{3}\%$$

74. (2) Required ratio =  $2 : 6 = 1 : 3$

75. (1) Required Average sell

$$= \left( \frac{3+4+10+6+6}{5} \right) \text{ million}$$

$$= \frac{29}{5} = 5.8 \text{ million}$$