

## ANSWER SET - 11

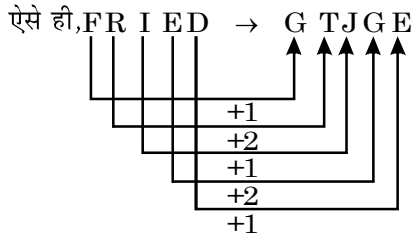
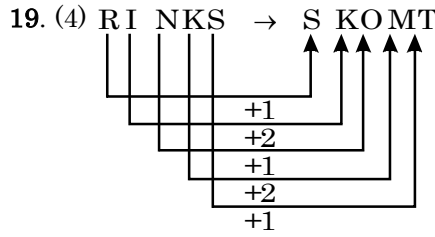
01. (4) 02. (3) 03. (2) 04. (3) 05. (1)  
 06. (2) 07. (3) 08. (4) 09. (3) 10. (2)  
 11. (4) 12. (4) 13. (2) 14. (1) 15. (2)  
 16. (4) 17. (3) 18. (3) 19. (4) 20. (1)  
 21. (4) 22. (3) 23. (3) 24. (2) 25. (3)  
 26. (3) 27. (1) 28. (3) 29. (3) 30. (2)  
 31. (2) 32. (3) 33. (1) 34. (3) 35. (4)  
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

## EXPLANATION - 11

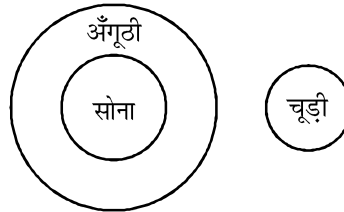
01. (4) जिस तरह, चतुर्भुज की चार भुजाएँ होती हैं, उसी तरह, त्रिभुज की तीन भुजाएँ होती हैं।  
 02. (3)  
 03. (2)  $13 : 17 : 19 : \boxed{23}$   
 $\begin{matrix} \uparrow & & \uparrow \\ +4 & & +4 \end{matrix}$   
 04. (3)  
 05. (1) E F G : G H I ऐसे ही, R F H :  $\boxed{T H J}$   
 $\begin{matrix} \uparrow & \uparrow & \uparrow & \uparrow \\ +2 & +2 & +2 & +2 \\ \uparrow & \uparrow & \uparrow & \uparrow \\ +2 & +2 & +2 & +2 \end{matrix}$   
 06. (2)  
 07. (3) 'C' सही है [इसके अलावा II, I के मापने की इकाई है।  
 08. (4)  
 09. (3)  $(12 - 1) = (11)^2 = 121;$   
 $(14 - 1) = (13)^2 = 169;$   
 $(16 - 1) = (15)^2 = \boxed{225}$

और यह 215 दिया है, जो गलत है.

10. (2)  
 11. (4) G F D : S Q O ; Z X V ; B Z U  
 $\begin{matrix} \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ -2 & -2 & -2 & -2 & -2 & +25 \end{matrix}$   
 12. (4)  
 13. (2) 12, 15, 19, 24, 30,  $\boxed{37}$   
 $\begin{matrix} \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ +3 & +4 & +5 & +6 & +7 \end{matrix}$   
 14.  
 15. (2) A D H M  $\boxed{S}$   
 $\begin{matrix} \uparrow & \uparrow & \uparrow & \uparrow \\ +3 & +4 & +5 & +6 \end{matrix}$   
 16.  
 17. (3) अरुणा चेतना बिमला  
  
 कुल = 18  
 18.



20.  
 21. (4)  $5 \div 4 - 10 + 7 \times 16$   
 दिया गया एक्सप्रेशन  
 $= 5 \times 4 \div 10 - 7 + 16$   
 प्रश्नानुसार,  
 $= 2 - 7 + 16 = 11$   
 22. (3)  
 23. (3)  $18 \times 12 - 3 \div 10 + 2 = 64$   
 $18 \times 12 \div 3 - 10 + 2 \rightarrow$  प्रश्नानुसार  
 $= 72 - 10 + 2 = 64$   
 24. (2)  
 25. (3)  $(9 + 3) \times 10 = 120;$   
 $(4 + 3) \times 10 = 70;$   
 $(2 + 9) \times 10 = 110;$   
 $(5 + 2) \times 10 = 70$   
 26. (3)  
 27. (1)  
 28. (3)  
 29. (3)



निष्कर्ष I. अनुसरण करता है.  
 निष्कर्ष II. अनुसरण करता है.

30. (2) Let the five numbers are a, b, c, d, e  
 $a \times b \times c \times d \times e = (\text{H.C.F.})^{n-1} \times \text{L.C.M.}$   
 $= (4)^{5-1} \times 27720$   
 $= 256 \times 27720$   
 $= 7096320$   
 31. (2)  
 32. (3) Weight of 1st type = 18 gm  
 Weight of 2nd type = 12 gm  
 Pure Gold is 24 carat  
 So,  
 $20 : 4 = 5 : 1 = 6 \times (4)$   
 $15 : 9 = 5 : 3 = 8 \times (2)$

$$\begin{aligned} \therefore 20 : 4 &= 24 \\ 10 : 6 &= 16 \\ 30 : 10 &= 40 \\ \downarrow \frac{24}{40} & \quad \downarrow \frac{24}{40} \\ \boxed{18} & \quad 24 \end{aligned}$$

[∵ ratio between 24 and 16 is same as ratio between 18 and 12]

33. (1) A N T C P V, E R X,  $\boxed{G T Z}$  I V B  
 $\begin{matrix} \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ +2 & +2 & +2 & +2 & +2 & +2 & +2 & +2 & +2 & +2 \end{matrix}$   
 34. (3) R.I. = 5% =  $\frac{1 \rightarrow \text{Interest}}{20 \rightarrow \text{Principal}}$

Amount same

$$\left(\frac{21}{20}\right)^3 A = \left(\frac{21}{20}\right)^5 B$$

$$\frac{A}{B} = \left(\frac{21}{20}\right)^2 = \frac{441}{400}$$

$$A \text{ gets} = \frac{441}{841} \times 2523$$

$$= \text{Rs. } 1323$$

35. (4)  $\begin{matrix} \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ +1 & +2 & +1 & +2 & +0 & +1 & +2 \end{matrix}$   
 36. (3) Let the length of the train = x m  
 Then the speed of the train  
 $= \frac{x}{8} \text{ m/sec}$

$$\text{And } \frac{x + 420}{20} = \frac{x}{8}$$

$$\Rightarrow \frac{x + 420}{5} = \frac{x}{2} \Rightarrow 2x + 840 = 5x$$

$$\Rightarrow x = 280$$

$$\text{speed of the train} = \frac{280}{8} \times \frac{18}{5}$$

$$\text{km/hr} = 126 \text{ km/hr}$$

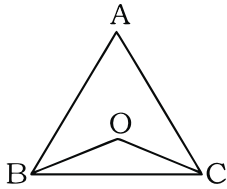
37. (4)  $(10 + 2 = 12 + 2 = 14);$   
 $(12 + 2 = 14 + 2 = 16);$   
 $(18 + 2 = 20 + 2 = 22);$   
 $(24 + 2 = 26 + 2 = \boxed{28})$  और दी

हुई संख्या = 30

38. (3) Fruits sold = 200 mangoes  
 Profit % =  $\frac{40}{200 - 40} = \frac{1}{4} = 25\%$

39. (3)

40. (2)



If O is orthocentre

$$\therefore \angle BOC = 180^\circ - \angle A$$

$$\therefore \angle BOC + \angle BAC = 180^\circ - \angle A + \angle A = 180^\circ$$

41. (2) छोटी संख्याओं की संख्या  
 $= 6000 \times \frac{5}{3} = 10000.$

42. (3)

$$\frac{a^6 + a^4 + a^2 + 1}{a^3} = a^3 + a + \frac{1}{a} + \frac{1}{a^3}$$

$$\Rightarrow a^3 + \frac{1}{a^3} + a + \frac{1}{a}$$

If  $a = 2 + \sqrt{3}$

$$\frac{1}{a} = \frac{1}{2 + \sqrt{3}} \times \frac{2 - \sqrt{3}}{2 - \sqrt{3}}$$

$$\frac{1}{a} = 2 - \sqrt{3}$$

$$a + \frac{1}{a} = 2 + \sqrt{3} + 2 - \sqrt{3} = 4$$

$$a^3 + \frac{1}{a^3} = (4)^3 - 4 \times 3 = 64 - 12 = 52$$

$$\Rightarrow \left(a^3 + \frac{1}{a^3}\right) + \left(a + \frac{1}{a}\right) = 52 + 4 = 56$$

43. (3)  $a^3 - 5 + \frac{128}{16a}$ , जहाँ  $a = 2.$

$$\Rightarrow 8 - 5 + \frac{128}{32} = 3 + \frac{128}{32} = 7$$

44. (3)  $5^{71} + 5^{72} + 5^{73} = 5^{70}(5 + 5^2 + 5^3)$   
 $= 5^{70}(5 + 25 + 125)$   
 $= 155 \times 5^{70}$   
 $= 155$

45. (2) वृत्त का क्षेत्रफल  $= \pi r^2 = 24.64$  हेक्टेयर  
 $= 24.64 \times 10000$  वर्ग मी.  
 $= 246400$  वर्ग मी.

$$\Rightarrow r^2 = 24600 \times \frac{7}{22} = 11200 \times 7$$

$$= 78400 \text{ मी.}$$

$$\Rightarrow r = 280 \text{ मी.}$$

$$\text{वृत्त की परिधि} = 2\pi r = 2 \times \frac{22}{7} \times$$

$$280 = 1760 \text{ मी.}$$

$$\text{खर्चा} = 1760 \times 5.40 = ₹ 9504$$

46. (4)  $x = 2 - 2^{\frac{1}{3}} + 2^{\frac{2}{3}}$

$$x - 2 = 2^{\frac{2}{3}} - 2^{\frac{1}{3}} \quad \dots\dots(i)$$

Cubing both sides

$$\Rightarrow x^3 - 8 - 6x(x-2) = (2)^2 - 2 -$$

$$3 \times 2^{\frac{2}{3}} \times 2^{\frac{1}{3}} \times \left(2^{\frac{2}{3}} - 2^{\frac{1}{3}}\right)$$

$$\Rightarrow x^3 - 8 - 6x^2 + 12x = 4 - 2 - 3 \times$$

$$2(x-2) \quad \text{[from equation]}$$

$$\Rightarrow x^3 - 6x^2 + 12x - 8 = 2 - 6$$

$$(x-2)$$

$$\Rightarrow x^3 - 6x^2 + 18x = 22$$

$$\therefore x^3 - 6x^2 + 18x + 40$$

$$= 22 + 40 = 62$$

47. (2)  $x : y = 5 : 7$

$$y : z = 5 : 3$$

$$\Rightarrow x : y : z = 25 : 5 : 21$$

$$\text{तो, } 25x + 35x + 21x = 162 \Rightarrow 81x$$

$$= 162 \Rightarrow x = 2$$

$$\text{तो, दूसरी संख्या} = 35x = 35 \times 2 = 70$$

48. (3) Drawn part  $= \frac{15}{150} = \frac{1}{10}$

Water = initial	:	later
10	:	9
$\frac{10}{100}$	:	$\frac{9}{81}$
	:	$\frac{19}{81}$

So, ratio of water and alcohol  
 $= 81 : 19$

49. (3) निवेश में अनुपात

$$= 4200 \times 3 : 6300 \times 6 : 8400 \times 12$$

$$= 12600 : 37800 : 100800$$

$$= 21 : 63 : 168$$

$$= 1 : 3 : 8$$

$$U \text{ का हिस्सा} = \frac{8}{12} \times 6000 = 4000$$

50. (3) Let the first number

$$= 17 \times 1 + 13 = 30$$

$$\text{second number} = 17 \times 1 + 11$$

$$= 28$$

$$\text{Sum} = 30 + 28 = 58$$

$$\therefore 58 \div 17, \text{Remainder} = 7$$

51. (2) दिया है,

$$\frac{x + x + 1 + x + 2 + x + 3 + x + 4 + x + 5}{6}$$

$$= \frac{15}{12}$$

$$\Rightarrow 6x + 15 = 6 \times \frac{15}{2} = 45$$

$$\Rightarrow 6x = 30$$

$$\Rightarrow x = 5$$

तो, आखिरी तीन संख्याओं का औसत

$$= \frac{x + 3 + x + 4 + x + 5}{3}$$

$$= \frac{8 + 9 + 10}{3} = \frac{27}{3} = 9$$

52. (3)

53. (2)  $S.I. = \frac{PRT}{100}$

$$\Rightarrow 65.5 = \frac{P \times 5 \times 6}{100 \times 12}$$

$$\Rightarrow P = ₹ 2,620$$

54. (3)

55. (3) लाभ% = 17,  
 S.P - C.P = 221

$$\text{अब, लाभ\%} = \frac{SP - CP}{CP} \times 100$$

$$\Rightarrow 17 = \frac{221}{CP} \times 100$$

$$\Rightarrow CP = \frac{221}{17} \times 100 = ₹ 1,300$$

$$\therefore SP = 1300 + 221 = ₹ 1,521$$

56. (1)

57. (2)  $684 \times 686 = 684(684 + 2)$   
 $= (684)^2 + 684 \times 2$

जब 1 जोड़ा जाए,

$$\text{तो, } (684)^2 + 2 \times 684 \times 1 + (1)^2 =$$

$$(684 + 1)^2 = (685)^2$$

59. (1) सुमित और अमित की आय में अनुपात

$$= \frac{1}{5} : \frac{1}{4} = 4 : 5$$

$$\text{सुमित का हिस्सा} = \frac{4}{9} \times 7200 = 3200$$

$$\text{अमित का हिस्सा} = \frac{5}{9} \times 7200 = 4000$$

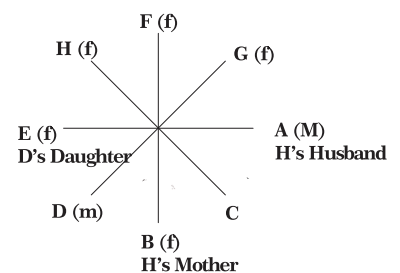
$$\text{अंतर} = 800$$

60. (1)

61. (2)  $\frac{x}{50} + \frac{x}{5} = 5 \frac{30}{60} = \frac{11}{2}$

$$\Rightarrow \frac{x + 10x}{50} = \frac{11}{2} \Rightarrow x = 25$$

Direction (62 - 65) :



62. (4)

65. (3)

66. (4)

63. (3)

64. (1)

67. (3)

68. (2)  $150 + 350 + 450 + 200 + 350 + 250 + 50 = 1750 + 50$   
 $= ₹ 1,800$  लाख

69. (4) केन्द्रीय कोण =  $\frac{150}{1800} \times 360^\circ = 30^\circ$

70. (2)  $\% = \frac{800}{1800} \times 100 = 44.44\%$

71. (4)

72. (4)

73. (4)  $d^2 = l^2 + b^2$   
 $\Rightarrow l^2 (25)^2 - (7)^2 = 625 - 49 = 576$   
 $\Rightarrow l = 24$  सेमी.

परिमाप =  $2(l + b) = 2(24 + 7)$   
 $= 2 \times 31 = 62$  सेमी.

74. (1)

75. (3) हम जानते हैं, आंतरिक कोण, बाहरी कोणों का दोगुना है.

$\Rightarrow 2x + x = 180^\circ$

$\Rightarrow 3x = 180^\circ$

$\Rightarrow x = 60^\circ$

76. (4) श्री संपति कवि बहन सम्मू बहन सीरी

Sister-in-law

श्री और कवि कालिंग स्पष्ट नहीं है।

77. (2) एक वृत्तीय शंकु के वक्र सतह का क्षेत्रफल  
 $= \pi r l = 99$

$\Rightarrow r = \frac{99 \times 7}{9 \times 22}$

$\Rightarrow r = \frac{7}{2}$  सेमी.

और,  $D = 2r = 2 \times \frac{7}{2} = 7$  सेमी.

78. (4) जिस प्रकार,

P U Z Z L I N G  
Z Z P U G N I L

तथा, J I P I J A P A  
I P I J A P A J

उसी प्रकार, S W I Z Z L E D  
Z I W S D E L Z

79. (3)  $\frac{1}{3} - \cot 60^\circ = \frac{1}{3} - \frac{1}{\sqrt{3}}$

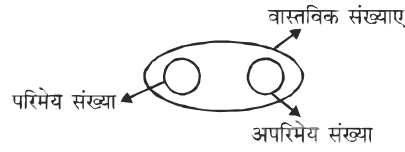
$= \frac{\sqrt{3} - 3}{3\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}}$

$= \frac{3 - 3\sqrt{3}}{9}$

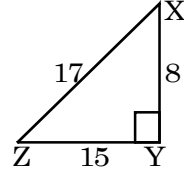
$= 3 \frac{(1 - \sqrt{3})}{9}$

$= \frac{1 - \sqrt{3}}{3}$

80. (3)



81. (4)  $\tan X = \frac{ZY}{XY} = \frac{15}{8}$



$\sin Z = \frac{8}{17}$