

IBPS Clerk

Solutions

31. (1) Total number of coins in the pocket is 18. Three coins can be selected from 18 coins in ways. When the three coins selected are ₹ 5 coins, then the person gets maximum amount.
∴ Favourable cases for the three coins selected being ₹ 5 coins is 7C_3 .

The probability that the person gets maximum amount is

$$\frac{{}^7C_3}{{}^{18}C_3} = \frac{35}{816}$$

32. (2) Required amount
 $= 300 \times 80 + 3\% \text{ of } (300 \times 80)$
 $= 24000 + \frac{3}{100} \text{ of } 24000$
 $= 24000 + 720 = ₹ 24720$
33. (5) Monthly salary of the manager
 $= 21 \times 200 - 20 \times 1900$
 $= ₹ 4000$
 ∴ Annual salary of the manager
 $= ₹ 48000$
34. (2) Suppose CP of the article = ₹ P
 SP of the article = $P - 10\% \text{ of } P$
 $= ₹ \frac{9P}{10}$
 New CP = $P - 20\% \text{ of } P = ₹ \frac{4P}{5}$
 New SP = ₹ $\left(\frac{9P}{10} + 55\right)$
 Profit = $\frac{4P}{5} \times \frac{40}{100} = ₹ \frac{8P}{25}$
 $\frac{4P}{5} + \frac{8P}{25} - \frac{9P}{10} = 55$
 ∴ $P = ₹ 250$

35. (2) Let the number of blue collars
 $= x$
 Number of white collars = y
 $\frac{y}{x} = \frac{1}{3}$

$$\Rightarrow x = 3y$$

$$\Rightarrow x - 3y = 0 \quad \dots(i)$$

$$\frac{y+5}{x-5} = \frac{1}{2}$$

$$\Rightarrow 2(y+5) = x-5$$

$$\Rightarrow x - 2y = 15 \quad \dots(ii)$$

Subtracting Eq. (i) from Eq. (ii),

$$y = 15$$

∴ $x = 3 \times 15 = 45 =$ Number of blue collar workers.

36. (2) $? = 14 + 37.5 - 17.5$
 $= 14 + 20 = 34$
37. (5) $? = \frac{420}{7} - 12 \times 4 + \sqrt[3]{343}$
 $= 60 - 48 + 7 = 19$
38. (2) $? = \frac{7}{3} + \frac{19}{5} - \frac{5}{3} + \frac{11}{5}$
 $= \frac{35 + 57 - 25 + 33}{15}$
 $= \frac{100}{15} = \frac{20}{3} = 6\frac{2}{3}$

39. (4) $17 - 2 - 80 = 17 - 82 = -65$
40. (2) $49 \times 18 + 21 = 49 \times 18 \times \frac{1}{21} = 42$
41. (3) John gave ₹ 12 to Hari and Hari gave ₹ 4 to John. Therefore, John gave ₹ 12 - ₹ 4 = ₹ 8 to Hari. Now, both of them have equal amount of money.
 So, Hari had the smaller amount initially by ₹ 8.

42. (4) Anup = $K - 3$
 [∴ $K =$ Kumar] ... (i)
 \Rightarrow Anil = Anup + 2
 \Rightarrow Anup = Anil - 2
 From Eq. (i), we have Anil - 2
 $= K - 3$
 $\Rightarrow K =$ Anil + 1
 ∴ Kumar is one year older than Anil.

43. (2) CI = $5000 \left[\left(1 + \frac{10}{100} \right)^2 \times \left(1 + \frac{20}{100} \right)^2 - 1 \right]$
 $= 5000 \times \frac{1856}{2500} = ₹ 3712$

44. (3) Taps A and B can fill the tank in
 1 h = $\left(\frac{1}{6} + \frac{1}{4} \right)$ part
 C in 1 h will empty = $\frac{1}{3}$ part

So, part filled by A + B - C in 1 h

$$= \frac{1}{6} + \frac{1}{4} - \frac{1}{3} = \frac{2+3-4}{12}$$

$$= \frac{5-4}{12} = \frac{1}{12}$$

So, tank will be filled in 12 h.

45. (1) The ratio of profit of the three persons = 1800 : 3000 : 4800
 $= 3 : 5 : 8$
 ∴ Investment of the second person
 $= \left(\frac{5}{16} \times 80000 \right) = ₹ 25000$

46. (1) $? \approx \frac{470}{55} \times \frac{970}{350} \times \frac{30}{60}$
 ≈ 11 (approx.)
47. (1) $? \approx 5735 - 3624 - 1513 + 3611$
 $= 4209 \approx 4210$ (approx.)
48. (4) $? \approx 33 \times 5 - 12 + 74 = 227$
 ≈ 230 (approx.)
49. (5) $? = \sqrt{4900} \times (7)^2$
 $= 3430 \approx 3450$ (approx.)
50. (2) $? \approx 62 \times 2800 + 340 + 120$
 $= 510.58 + 120 \approx 630$ (approx.)

51. (3) Amount of saw dust in 2 kg of haldi = $2000 \times \frac{5}{100} = 100$ g
 Required proportion = 4%
 $\Rightarrow \frac{100}{2000 + x} = \frac{4}{100}$
 $\Rightarrow x = 500 \Rightarrow x = 0.5$ kg

52. (1) Cost price of 60 kg mangoes
 $= 60 \times 9 = ₹ 540$
 10% of mangoes are wasted
 ∴ Number of mangoes to be sell.
 $= 60 \times \frac{100 - 10}{100} = \frac{60 \times 90}{100} = 54$
 Selling price if 54 nabgies
 $= 54 \times 15 = 810$
 Net profit = $810 - 540 = ₹ 270$

53. (1) Suppose the concentration of acids in two containers A and B are $x\%$ and $y\%$ respectively.

$$\text{Quantity of Acid in A} = 6 \times \frac{x}{100}$$

$$\text{Quantity of Acid in B} = 3 \times \frac{y}{100}$$

Suppose k L acid is emptied from each container, then

$$\text{Total acid in A} = \frac{6x}{100} - \frac{k \times x}{100} + \frac{k \times y}{100}$$

$$\text{Total acid in B} = \frac{3y}{100} - \frac{k \times y}{100} + \frac{kx}{100}$$

According to the questions,

$$\frac{6x - kx + ky}{100 - 100 + 100} \times 100$$

$$= \frac{3y - ky + kx}{3} \times 100$$

$$\Rightarrow \frac{6x}{100} - \frac{kx}{100} + \frac{ky}{100} = \frac{6y}{100} - \frac{2ky}{100} + \frac{2kx}{100}$$

$$\Rightarrow \frac{6}{100}(x - y) = \frac{3k}{100}(x - y)$$

$$\therefore k = 2L$$

54. (4) Number of persons travelling without tickets in April

$$= 4000 \left(1 + \frac{5}{100}\right) \left(1 - \frac{5}{100}\right) \left(1 - \frac{10}{100}\right)$$

$$= 4000 \times \frac{105}{100} \times \frac{95}{100} \times \frac{90}{100} = 3591$$

55. (4) Let the speed of train be x m/s

$$\therefore \frac{320 + 640}{x} - \frac{320}{x} = 80$$

$$\Rightarrow \frac{960 - 320}{x} = 80$$

$$\Rightarrow \frac{640}{x} = 80 \Rightarrow x = 8 \text{ m/s}$$

56. (2) The pattern of number series is as follow

$$484 \quad 240 \quad \boxed{120} \quad 57 \quad 26.5 \quad 11.25 \quad 3.625$$

$$\begin{array}{ccccccc} & \uparrow & & \uparrow & & \uparrow & \\ & +2-2 & & +2-2 & & +2-2 & \\ & \downarrow & & \downarrow & & \downarrow & \end{array}$$

Hence, wrong number is 120.

57. (4) The pattern of number series is as follow

$$3 \quad 5 \quad 13 \quad 43 \quad \boxed{176} \quad 891 \quad 5353$$

$$\begin{array}{ccccccc} & \uparrow & & \uparrow & & \uparrow & \\ & \times 1+2 & & \times 2+3 & & \times 3+4 & \\ & \downarrow & & \downarrow & & \downarrow & \end{array}$$

Hence, wrong number is 176.

58. (5) The pattern of number series is as follow

$$6 \quad 7 \quad 16 \quad 41 \quad 90 \quad \boxed{154} \quad 292$$

$$\begin{array}{ccccccc} & \uparrow & & \uparrow & & \uparrow & \\ & +1^2 & & +3^2 & & +5^2 & \\ & \downarrow & & \downarrow & & \downarrow & \end{array}$$

Hence, wrong number is 154.

59. (1) The pattern of number series is as follow

$$5 \quad \boxed{7} \quad 16 \quad 57 \quad 244 \quad 1245 \quad 7506$$

$$\begin{array}{ccccccc} & \uparrow & & \uparrow & & \uparrow & \\ & \times 1+1^2 & & \times 2+2^2 & & \times 3+3^2 & \\ & \downarrow & & \downarrow & & \downarrow & \end{array}$$

Hence, wrong number is 7.

60. (3) The pattern of number series is as follow

$$4 \quad 2.5 \quad 3.5 \quad \boxed{6.5} \quad 15.5 \quad 41.25 \quad 126.75$$

$$\begin{array}{ccccccc} & \uparrow & & \uparrow & & \uparrow & \\ & \times \frac{1}{2} + \frac{1}{2} & & \times 1 + 1 & & \times \frac{3}{2} + \frac{3}{2} & \\ & \downarrow & & \downarrow & & \downarrow & \end{array}$$

Hence, wrong number is 6.5.

61. (1) Required difference

$$= \frac{84 - 74}{360} \times 450 = 12.5$$

62. (3) Required percentage

$$= \frac{70}{60} \times 100 = 116.66\%$$

63. (2) Average score = $\frac{360}{5} = 72^\circ$

In B and E he scored more than 72° .

64. (1) Required percentage

$$= \frac{(74 + 70) - (60 + 72)}{(60 + 72)} \times 100$$

$$= 12 / 132 \times 100$$

$$= 1 / 11 \times 100 = 9.09\%$$

65. (4) As there is no change in the marks scored by Anirudh and as he got more than 80 marks in four of the five subjects earlier, now also he will get more than 80 marks in four of the five subjects.

ol. (Q. Nos. 66-70)

Country	Flower	National animal
China	Rose	Bear
Russia	Jasmine	Lion
India	Lotus	Elephant
Brazil	Lily	Tiger
Germany	Sunflower	Panther

66. (3) Elephant is the national animal of India.

67. (1) Tiger is the national animal of Brazil.

68. (1) Jasmine is the national flower of Russia.

69. (4) Rose is the national flower of China.

70. (3) Lotus is the national flower of India.

71. (4) Required element

= (14 - 6)th element from left end

= 8th element from left end = K

72. (2) According to the question, new arrangement

H 3 R M A K 2 P 5 E N 4 W

F Q 1 U V 9 J 1 D 7 8

↑

11th from right end

73. (5) Consonant Number Consonant

H 3 R, K 2 P, N 4 W, V 9 J

74. (1) Consonant Number Symbol

None formed.

$$3 \xrightarrow{+6} K \xrightarrow{+6} N \xrightarrow{+6} \boxed{Q}$$

$$75. (3) \% \xrightarrow{+6} P \xrightarrow{+6} W \xrightarrow{+6} U$$

$$M \xrightarrow{+6} 5 \xrightarrow{+6} @ \xrightarrow{+6} V$$

76. (3) CAT NOW RAT SAD WAF

∴ Required word = SAD

77. (1) Second word form right end

= R A T

Second word form left end

= S A D

∴ Hence, two letters (B and C) between 'A' and 'D'.

78. (1)

NOW	SAD	WAF	RAT	CAT
-1↓	-1↓	-1↓	-1↓	-1↓
NOV	SAC	WAE	RAS	CAS

∴ There is no such word can be formed.

79. (2)

NOW	SAD	WAF	RAT	CAT
X	X	X	X	X
WON	DAS	FAW	TAR	TAC

∴ Two meaningful words can be formed.

80. (2)

N	O	W	S	A	D	W	A	F
-1↓	+1↓	-1↓	-1↓	+1↓	-1↓	-1↓	+1↓	-1↓
M	P	V	R	B	C	V	B	E

R	A	T	C	A	T
-1↓	+1↓	-1↓	-1↓	+1↓	-1↓
Q	B	S	B	B	S

∴ Only one word in which have atleast one vowel.

ol. (Q. Nos. 81-85)

$$\cdot @ \Rightarrow < \quad \% \Rightarrow \geq$$

$$\star \Rightarrow = \quad \# \Rightarrow >$$

$$\S \Rightarrow \leq$$

81. (2) According to the questions,

$$P \star V \Rightarrow P = V,$$

$$V \% U \Rightarrow V \geq U,$$

$$U \# N \Rightarrow U > N$$

$$\therefore P = V \geq U > N$$

Conclusions

I. $P \% N \Rightarrow P \geq N$ (False)

II. $V \# N \Rightarrow V > N$ (True)

So, only II is true.

82. (3) According to the question,

$$M @ T \Rightarrow M < T$$

$$T \S W = T \leq W$$

$W \# R \Rightarrow W > R$

$\therefore M < T \leq W > R$

Conclusions

- I. $M @ R \Rightarrow M < R$
 - II. $M \% R \Rightarrow M \geq R$
- } or

So, either I or II is true.

83. (1) According to the questions,

$H \% K \Rightarrow H \geq K$

$K \# M \Rightarrow K > M$

$M \$ W \Rightarrow M \leq W$

$\therefore H \geq K > M \leq W$

Conclusions

I. $H \# M \Rightarrow H > M$ (True)

II. $K \star W \Rightarrow K = W$ (False)

So, only I is true.

84. (4) According to the questions,

$V @ L \Rightarrow V < L$

$L \% J \Rightarrow L \geq J$

$J \$ T \Rightarrow J \leq T$

$\therefore V < L \geq J \leq T$

Conclusions

I. $V @ J \Rightarrow V < J$ (False)

II. $L \star T \Rightarrow L = T$ (False)

So, neither I nor II is true.

85. (5) According to the question,

$F \% Q \Rightarrow F \geq Q$

$Q \# D \Rightarrow Q > D$

$D \% N \Rightarrow D = N$

$\therefore F \geq Q > D = N$

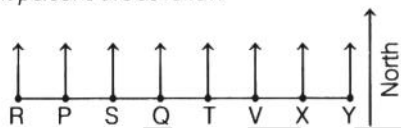
Conclusions

I. $F \# N \Rightarrow F > N$ (True)

II. $N @ Q \Rightarrow N < Q$ (True)

So, both I and II are true.

Sol. (Q. Nos. 86-90) Sitting arrangement of eight persons are as follow



86. (3) Q is second to right of P.

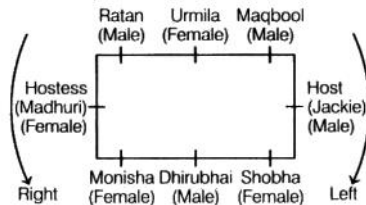
87. (5) R and Y are seated at the two extreme ends of line.

88. (3) There are three person (P, S and Q) between R and T.

89. (1) V is related to Y (Second person seated second to the right of first person.)

90. (2) S is sitting between P and Q.

Sol. (Q. Nos. 91-95) By analysing the given information, the arrangement is as follows

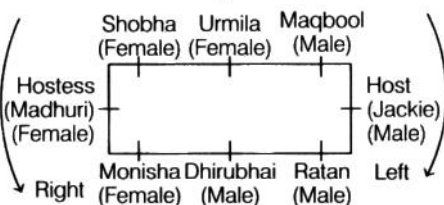


91. (3) By analysing the above arrangement, it is clear that, Jackie Must be $\xrightarrow{\text{host}}$ Seated to \rightarrow Shobha's right.

Therefore, only I and II are true.

92. (4) By analysing the above arrangement, it is clear that, Shobha (Female) $\xrightarrow{\text{Seated}}$ between Dhirubhai (Male) and Jackie (Male)

93. (1) By analysing above arrangement and according to the question, it is clear that Ratan exchanged with Shobha four places to his left The new arrangement is as follows



From the new arrangement, it is clear that only Statement I is true.

94. (1) By analysing the above arrangement and according to the question, we get

Married Couples

(i) Jackie (Host) and Madhuri (Hostess)

\Leftrightarrow Opposite to each other.

(ii) Ratan and Monisha \Leftrightarrow Opposite to each other.

(iii) Urmila and Dhirubhai \Leftrightarrow Opposite to each other.

(iv) Maqbool and Shobha \Leftrightarrow Opposite to each other.

95. (1) Madhuri is the hostess.

96. (2) A, E, I, O, U; 2, 3, 5, 7, 11

$A \rightarrow B, E \rightarrow F, I \rightarrow J,$

$O \rightarrow P, U \rightarrow V$

A2B, E3F, I5J, O7P, U11V

97. (4) Each letter in the word is replaced by the letter which occupies the same position from the other end of the alphabet, to obtain the code.

Sol. (Q. Nos. 98 and 99) According to the information,

$$P > Q > U > R > T > S$$

\downarrow
63 kg

\downarrow
50 kg

98. (1) Weight of S could possibly be 49 kg.

99. (4) Possible weight of R will be 61 kg.

100. (4) Given number = 4 2 1 6 5 3

New number = 2 4 6 1 3 5

Hence, 1 will be the third digit from the right after the rearrangement.