

ANSWER SET - 09

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

EXPLANATION - 09

6. (1) Replace 'is' with 'are'
 7. (4) Replace 'nobody' with 'none'
 8. (3) Replace 'much' with 'many'
 9. (1) Replace 'are' with 'were'
 10. 5
 (11-15) : A E C D B F

$$31. (4) (?)^2 = \frac{98}{14} \times 49 - 294$$

$$= 343 - 294 = 49$$

$$\therefore ? = \pm 7$$

$$32. (1) ? = \frac{\sqrt{576}}{4^2} \times 7.4 + 7^3 - 231$$

$$= 11.1 + 343 - 231 = 123.1$$

$$33. (4) 23\% \text{ of } 8040 + 42\% \text{ of } 545 = \% \text{ of } 3000$$

$$\text{Solving breaking method,}$$

$$(20\% \text{ of } 8040 + 3\% \text{ of } 8040) + (40\% \text{ of } 545 + 2\% \text{ of } 545) = 30 \times ?$$

$$\text{or, } \left(\frac{1}{5} \times 8040 + 3 \times 80.40 \right) +$$

$$\left(\frac{2}{5} \times 545 + 2 \times 545 \right) = 30 \times ?$$

$$\text{or, } 1608 + 241.2 + 218 + 10.90 = 30 \times ?$$

$$\therefore ? = \frac{2078.1}{30} = 69.27$$

$$34. (1) ? = 12 \frac{1}{3} + 10 \frac{5}{6} - 7 \frac{2}{3} - 1 \frac{4}{7}$$

$$= (12 + 10 - 7 - 1) +$$

$$\left(\frac{1}{3} + \frac{5}{6} - \frac{2}{3} - \frac{4}{7} \right)$$

$$= 14 + \left(\frac{14 + 35 - 28 - 24}{42} \right)$$

$$= 13 + \left(1 - \frac{3}{42} \right) = 13 \frac{13}{14}$$

$$35. (1) 3^{3.5} \times (3 \times 7)^2 \times (2 \times 3 \times 7)^{2.5} \div 2^{2.5} \times 7^{3.5} = 21^?$$

$$\Rightarrow 21^? =$$

$$\frac{3^{3.5} \times 3^2 \times 7^2 \times 2^{2.5} \times 3^{2.5} \times 7^{2.5} \times 7^{3.5}}{2^{2.5}}$$

$$= (3)^8 \times (7)^8 = (21)^8$$

$$\therefore ? = 8$$

$$36. (1) ? = 35\% \text{ of } (34 \times 55) + 456.60 - 699.1$$

$$= \frac{7}{20} \times 34 \times 55 + 456.60 - 699.1$$

$$= 654.5 + 456.60 - 699.1 = 412$$

$$37. (3)$$

$$(\sqrt{7} + 11)^2 = (?)^{\frac{1}{3}} + 2\sqrt{847} + 122$$

$$\Rightarrow (\sqrt{7})^2 + (11)^2 + 2\sqrt{7} \times 11 = (?)^{\frac{1}{3}}$$

$$+ 2\sqrt{847} + 122$$

$$\Rightarrow 7 + 121 + 2 \times \sqrt{7 \times 11 \times 11} = (?)^{\frac{1}{3}}$$

$$+ 2\sqrt{847} + 122$$

$$\Rightarrow (?)^{\frac{1}{3}} = 128 - 122 = 6$$

$$\therefore ? = 6 \times 6 \times 6 = 216$$

$$38. (3) ? = 7960 + 2956 - 8050 + 4028 = 6894$$

$$39. (1) \frac{? \times 7}{2} \times \frac{1}{50} = 591 - 248 = 343$$

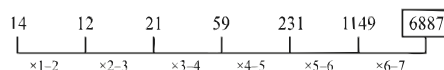
$$\therefore ? = \frac{343 \times 100}{7} = 4900$$

$$40. (1) 3842 \times \frac{1}{2} + \frac{? \times 15}{100} = 2449$$

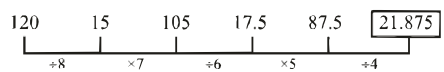
$$\text{or, } \frac{? \times 3}{20} = 2449 - 1121 = 528$$

$$\therefore ? = \frac{528 \times 20}{3} = 3520 = 3520$$

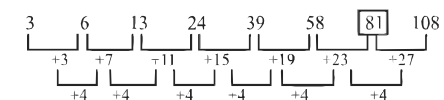
$$41. (3)$$



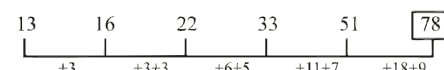
$$42. (3)$$



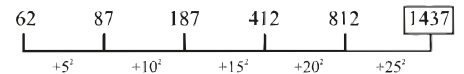
$$43. (5)$$



$$44. (2)$$



$$45. (2)$$



$$46. (2) \text{ Required difference}$$

$$= \frac{1}{5} (15500 - 15000) = \frac{500}{5} = 100$$

47. (2) More demand than production in Lenovo, Dell and HP. Thus there are three companies. Again more production than demand in Sony and Apple. Hence, there are two companies.

$$\therefore \text{ Required ratio} = \frac{3}{2} = 3 : 2$$

$$48. (1) \text{ Required percentage} =$$

$$\frac{35}{25} \times 100 = 140\%$$

$$49. (3) \text{ Required ratio} = \frac{75}{65} = 15 : 13$$

$$50. (4) \text{ Required average}$$

$$= \frac{3500 + 4000 + 2500}{3} = \frac{10000}{3}$$

$$= 3333.33 \approx 3333$$

51. (1) Let the length of Train Y be $2z$ then the length of Train X be z
 Now ratio of speed of train X to y

$$= \frac{z}{25} \times \frac{75}{2z} = \frac{75}{50} = 3 : 2$$

52. (3) Let the actual average age of the class of 13 students be x years
 Now, according to the question
 $13x = 14(x + 2) - 35$

$$\text{or, } 35 - 28 = x$$

$$\therefore x = 7 \text{ years}$$

Quicker Method :

$$\text{Average age} = 35 - 14 \times 2 = 7 \text{ years}$$

$$53. (1) \text{ Ratio of profit} = 5 : 9$$

Now,

$$\frac{\text{Share of Inderesh investment}}{\text{Share of Alok investement}}$$

$$= \frac{\text{Profit of inderesh}}{\text{Profit of Alok}}$$

$$\text{or, } \frac{5 \times 8}{6 \times (\text{months})x} = \frac{5}{9}$$

$$\text{or, } x = \frac{5 \times 8 \times 9}{5 \times 6} = \frac{72}{6} = 12 \text{ months}$$

Thus, Alok investment the amount for 12 months

$$54. (1) \text{ Total number of balls} = 3 + 4 + 5 = 12$$

Now, two balls are chosen randomly

$$\text{The number of sample space} = n(S) = {}^{12}C_2$$

Number of favourable events $n(E)$
 $= {}^3C_1 \times {}^5C_1 = 3 \times 5 = 15$

$$\therefore P(E) = \frac{n(E)}{n(S)} = \frac{15}{11 \times 12} = \frac{5}{22}$$

$$= \frac{15}{66} = \frac{5}{22}$$

55. (3) Let the work be LCM of 24 and 25 = 600 unit.

Then, A can do $\frac{600}{24} = 25$ unit/day

⊙ A work for 4 days

∴ A can do the work in 4 days = $25 \times 4 = 100$ unit

∴ Remaining work = $600 - 100 = 500$

So, 500 unit work done by B in 25 days.

So, B can do the work in one days

$$= \frac{500}{25} = 20 \text{ days units}$$

∴ They work together finish the

$$\text{work in } \frac{600}{45} = 13\frac{1}{3} \text{ days}$$

56. (1) Taps A, B and C can fill the cistern in 11 hours in three hours

(A + B + C) can fill $\frac{3}{11}$ part of cistern

$$\text{Remaining part} = \left(1 - \frac{3}{11}\right) = \frac{8}{11}$$

part of the cistern can filled tap A and C in 16 hours more

∴ Cistern can be filled by A and C

$$\text{in } \frac{11 \times 16}{8} = 22 \text{ hours}$$

∴ in one hour cistern B alone can

$$\text{fill} = \frac{1}{11} - \frac{1}{22} = \frac{1}{22}$$

Hence, B can alone fill the cistern in 22 hours

57. (4) Compound interest = 4200

$$\text{Now, } 10 + 10 + \frac{10 \times 10}{100} = 4200$$

⊙ 21% = 4200

$$\therefore 100\% = \frac{4200}{21} \times 100 = ₹20000$$

Then P = 20000, R = 10%, T = 2 years

$$\therefore \text{SI} = \frac{20000 \times 10 \times 2}{100} = ₹4000$$

58. (4) Let the quantity of the two types of mixture be $3x$ and $4x$

respectively

Then, total cost = $(3x \times 160 + 4x \times 180)$

$$= 480x + 720x = ₹1200x$$

$$\therefore \text{Profit} = 1225x - 1200x = 25x$$

$$\therefore \text{Profit percent} = \frac{25x}{1200x} \times 100$$

$$= \frac{25}{12} = 2.08$$

59. (1) Required percentage increase

$$= 12 + 17 + \frac{12 \times 17}{100} = 29 + 2.04 =$$

$$31.04\%$$

60. (3) Difference between first period and fourth period

$$= 2:45 \text{ pm} - 11:30 \text{ am}$$

$$= 3 \text{ hours } 15 \text{ m}$$

There was rest for 5 minutes every period

$$\therefore \text{Total rest time} = 3 \times 5 = 15 \text{ minutes}$$

$$\therefore \text{Total time period of class} = 3 \text{ hours}$$

$$\therefore \text{Time period of each class} = \frac{3}{4}$$

$$\text{hours} = 45 \text{ minutes}$$

61. (3) Let the radius of the circular field be r and side of the square be x

Then $x = r$

$$\text{Now, } \pi r^2 - r^2 = 105$$

$$\text{or, } r^2 \left(\frac{22}{7} - 1\right) = 105$$

$$\text{or, } \frac{r^2 \times 15}{7} = 105$$

$$\therefore r = 7$$

$$\therefore \text{Perimeter of the circular field} = 2\pi r$$

$$= 2 \times \frac{22}{7} \times 7 = 44 \text{ m}$$

62. (1) Let the five consecutive odd numbers be $x, x + 2, x + 4, x + 6$ and $x + 8$

Now, average of the first two num-

$$\text{bers} = \frac{x + x + 2}{2} = x + 1$$

Average of last two numbers =

$$= \frac{x + 6 + x + 8}{2} = x + 7$$

Now according to the question

$$(x + 7)^2 - (x + 1)^2 = 492$$

$$\text{or } x^2 + 14x + 49 - x^2 - 2x - 1 = 492$$

$$\text{or, } 12x = 492 - 48$$

$$\therefore x = \frac{444}{12} = 37$$

Hence, the smallest number is 37

63. (1) Let the toppers marks be x
 Sum of average of 5 toppers

$$= 55 \times 5 + 83 \times 5 = 690$$

$$\text{So, } x + (x - 1) + (x - 2) + (x - 3) + (x - 4) = 690$$

$$\text{or, } 5x = 700$$

$$\therefore x = 140$$

64. (5) Let the speed of the car be x km/hr

$$\text{so, } x - 38 = \frac{40 + 60}{20} \times \frac{18}{8}$$

$$\text{or, } x - 38 = 18$$

$$\therefore x = 56 \text{ km/hr}$$

65. (4) Ratio of each piece of diamond = $2x : 3x : 4x$

$$\therefore \text{Solid diamond} = 2x + 3x + 4x = 9x$$

$$\therefore \text{Cost of solid diamond} = (9x)^2 = 81x^2$$

$$\text{Cost of broken diamond} = (2x)^2 + (3x)^2 + (4x)^2 = 29x^2$$

$$\therefore \text{Loss} = 81x^2 - 29x^2 = 52x^2 \dots\dots(i)$$

$$\therefore x^2 = \frac{24300}{81} = 300$$

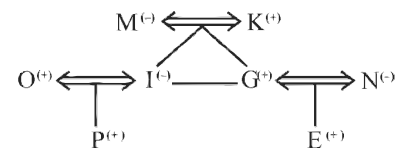
$$\therefore \text{Loss} = 52 \times 300 = 15600$$

(66-70):

Floors	Person
8	E
7	D
6	G
5	B
4	C
3	A
2	H
1	F

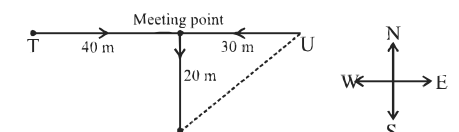
66. 4 67. 2 68. 5 69. 3 70. (5) D

(71-73): Family tree



71. 3 72. 1 73. 2

(74-75)



74. (3) Total distance = $40 + 30 = 70 \text{ m}$

75. (1)

(76-80)

76. (3) After rearranging -

CAR MAN RUN SON TEA

77. (5)

Second word from the right – TEA
 and its third letter – A
 Second letter from the left – CAR
 and its first letter – C
 Now, A B C
 Thus only one letter is between A
 and C.

78. (5)
 RUN CAR SON TEA MAN
 RVN CBR SPN TFA MBN
 Thus, there are four word formed.

79. (5)
 RUN CAR SON TEA MAN
 NUR RAC NOS AET NAM

80. (1)
 RUN CAR SON TEA MAN
 QVM BBQ RPM SFB LBM

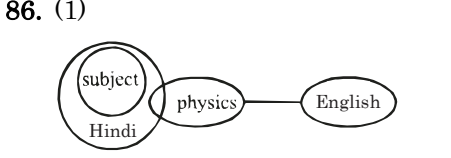
(81-85)
 81. (2) Given :
 $C < B \geq J = G$ (i)
 $I > C$ (ii)
 Combining (i) and (ii), we get
 $I > C < B \geq J = G$
 (I) $I \geq B$ we can't compare I and B. So, conclusion I is not true.
 (II) $B \geq G$ is true. So, conclusion II is true.

82. (1) Given :
 $N \leq M \leq K < G$
 $D > E = N$ (ii)
 Combining (i) and (ii), we get
 $D > E = N \leq M \leq K < G$
 (I) $E \leq K$ is true. So, conclusion I is true.
 (II) $E \geq M$ is not true. So, conclusion II is not true.

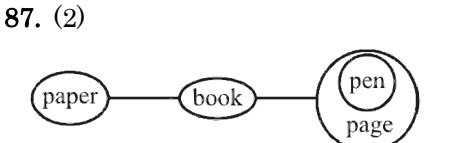
83. (5) Given :
 $O < M \leq N = G \leq P = Q$
 (I) $O < P$ is true. So, conclusion I is true.
 (II) $Q \geq M$ is true. So, conclusion II is also true.

84. (4) Given :
 $Z = W \leq Y > S = T$
 (I) $T \leq W$, we can't compare T and W. So, conclusion I is not true.
 (II) $Z < T$, we can't compare Z and T. So, conclusion II is also not true.

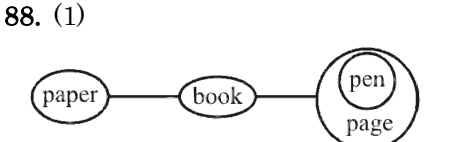
85. (1) Given :
 $L \leq M = Q < O = U > N$
 (I) $L < U$ is true. So, conclusion I is true.
 (II) $M > N$, we can't compare M and N. So, conclusion II is not true.



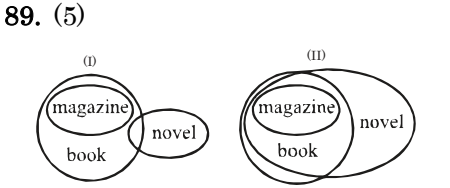
(I) The part of Hindi which is Physics, never be English.
 So, conclusion I follows.
 (II) Conclusion II doesn't follow.



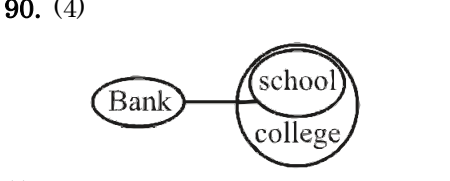
(I) Conclusion I doesn't follow.
 (II) Conclusion II follows.



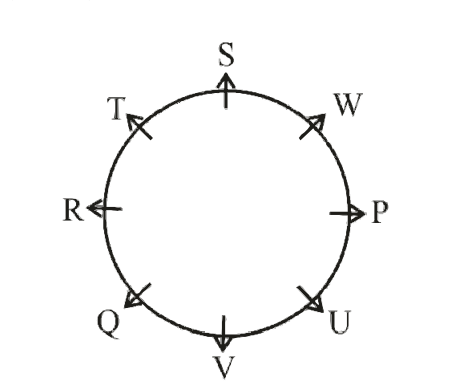
(I) Conclusion I follows.
 (II) Conclusion II doesn't follow.



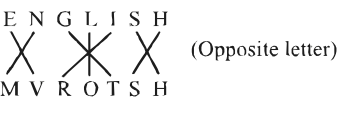
(I) From diagram II, conclusion I follows.
 (II) Conclusion II also follows.



(I) Conclusion I doesn't follow.
 (II) Conclusion II also doesn't follow.



91. (1) 92. (2) 93. (5) 94. (4) 95. (3)
 96. (1) B A C H L O R
 97. (2) Meaningful English word — PAIR
 98. (2)



100. 2;

3	7	6	5	2	9	8	1
9	8	7	6	5	3	2	1