

ANSWER SET - 05

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

EXPLANATION - 05

1. (1) Replace 'has' with 'have'
 2. (1) Replace 'believes' with 'belief'
 3. (3) Omit 'of'
 4. (1) Replace 'than' with 'then'
 5. (1) Add 'the' before 'world'
 6. (2) 7. (4) 8. (5) 9. (3) 10. (2)
 11. (4) 12. (1) 13. (3) 14. (1) 15. (2)
 (16-20): B D C E A
 16. (1) 17. (3) 18. (2) 19. (5) 20. (4)
 21. (3) 22. (1) 23. (5) 24. (2) 25. (2)
 26. (1) 27. (4) 28. (5) 29. (2) 30. (3)
 31. (3) Both statements I and II are necessary to give the answer.
 The three digit number is 616 (which is also divisible by 14)
 32. (3) From I ; SI = ₹2100 (for 2 years)
 From II ; r = 10%
 From I and II; $P = \frac{2100 \times 100}{2 \times 10}$
 = ₹ 10,500
 33. (4) From I; $15 \times 24 = \text{Man} \times 18$
 \Rightarrow Required number of men = $\frac{15 \times 24}{18} = 20$
 From II; Required number of men = $\frac{12 \times 30}{18} = 20$
 Hence, statement I alone or statement II alone is sufficient to answer the question.
 34. (3) Profit percent earned by Company
- $$S = \frac{6.25 - 5.25}{5.25} \times 100 \approx 19\%$$
- Company P =

$$\frac{5.5 - 4.25}{4.25} \times 100 \approx 29\%$$

\therefore Required difference = (29 - 19)% = 10%

35. (2) Profit percent earned by company

$$P = \frac{5.5 - 4.25}{5.5} \times 100 \approx 29\%$$

$$Q = \frac{6.25 - 5.5}{5.5} \times 100 \approx 13.6\%$$

$$R = \frac{4.5 - 4}{4} \times 100 \approx 12.5\%$$

$$S = \frac{6.25 - 5.25}{5.25} \times 100 \approx 19\%$$

$$T = \frac{5.75 - 4.5}{4.5} \times 100 \approx 27.8\%$$

Hence, maximum is of company P.

36. (5) Required percentage =

$$\frac{4}{5.5} \times 100 \approx 73\%$$

37. (5) Total expenditure incurred by all the companies together (in ₹ crore)

$$= 4.25 + 5.5 + 4 + 5.25 + 4.5 = 23.5$$

38. (4) Required ratio = (5.5 - 4.25) + (4.5 - 4) : (6.25 - 5.25) + (5.75 - 4.5)
 = (1.25 + 0.5) : (1 + 1.25)
 = 1.75 : 2.25 = 175 : 225 = 7 : 9

39. (1) Suppose the two digit number be 10x + y

$$\text{Then, we have, } \frac{10X + Y}{X + Y} = \frac{4}{1}$$

$$\Rightarrow 10x + y = 4x + 4y$$

$$\Rightarrow 6x = 3y$$

$$\Rightarrow y = 2x$$

$$\text{And, } y = x + 2$$

$$\therefore \text{ then, } x = 2 \text{ and } y = 4$$

\therefore the number is 24. Hence unit digit is 4.

40. (1) \therefore Required time taken =

$$\frac{12 \times 10}{24 \times 30 - 12} = \frac{120 \times 54}{720 - 648}$$

$$= \frac{120 \times 54}{72} = 90 \text{ min}$$

41. (2) Population of E = 12% of 10000000 = 1200000

42. (4) Total population of B is 20% of 10000000 = 2000000. Out of that population, people whose age is below 18 is 32%,

$$\text{ie } \frac{32 \times 2000000}{100} = 640000$$

43. (3) Avg population of the five cities whose age is 19-60 is 1250000 + 800000

$$+ 1540000 + 675000 + 720000$$

$$= 997000$$

44. (4) It is 560000.

45. (1)

$$\text{Ratio} = \frac{\text{population of 'C'}}{\text{population of 'D'}} = \frac{700000}{300000} = \frac{7}{3}$$

46. (2) I. or, $x^2 - 9x + 14 = 0$

$$\text{or, } x^2 - 9x + 14 = 0$$

$$\text{or, } x(x - 7) - 2(x - 7) = 0$$

$$\text{or, } x(x - 7)(x - 2) = 0$$

$$\therefore x = 7 \text{ or } 2$$

- II. $y^2 - 15y + 56 = 0$

$$\text{or, } y^2 - 8y - 7y + 56 = 0$$

$$\text{or, } y(y - 8) - 7(y - 8) = 0$$

$$\text{or, } (y - 8)(y - 7) = 0$$

$$\therefore y = 8 \text{ or } 7$$

Comparing the values of x and y, we get $x \leq y$.

47. (3) I. $x^2 - 8x + 12 = 0$

$$\text{or, } x^2 - 2x - 6x + 12 = 0$$

$$\text{or, } x(x - 2) - 6(x - 2) = 0$$

$$\text{or, } (x - 2)(x - 6) = 0$$

$$\therefore x = 2 \text{ or } 6$$

- II. $y^2 - 3y + 2 = 0$

$$\text{or, } y(y - 2) - 1(y - 2) = 0$$

$$\text{or, } y(y - 2) - 1(y - 2) = 0$$

$$\text{or, } (y - 2)(y - 1) = 0$$

$$\therefore y = 2 \text{ or } 1$$

Comparing the values of x and y, we get $x \geq y$.

48. (5) I. $x^2 + 8x - 33 = 0$

$$\text{or, } x^2 - 3x + 11x - 33 = 0$$

$$\text{or, } x(x - 3) + 11(x - 3) = 0$$

$$\therefore x = 3 \text{ or } -11$$

- II. $y^2 + 8y - 48 = 0$

$$\text{or, } y^2 + 12y - 4y - 48 = 0$$

$$\text{or, } y(y + 12) - 4(y + 12) = 0$$

$$\text{or, } (y - 4)(y + 12) = 0$$

$$\therefore y = 4 \text{ or } -12$$

Compare the values of x and y. We can't establish relationship between x and y.

49. (1) I. $6x^2 + 61x + 143 = 0$

$$\text{or, } 6x^2 + 22x + 39x + 143 = 0$$

$$\text{or, } 2x(3x + 11) + 13(3x + 11) = 0$$

$$\text{or, } (2x + 13)(3x + 11) = 0$$

$$\therefore x = \frac{-13}{2} \text{ or } \frac{-11}{3}$$

II. $12y^2 - 41y + 35 = 0$
 or, $12y^2 - 21y - 20y + 35 = 0$
 or, $3y(4y - 7) - 5(4y - 7) = 0$
 or, $(3y - 5)(4y - 7) = 0$

$$\therefore y = \frac{5}{3} \text{ or } \frac{7}{4}$$

Comparing the values of x and y, we get $x < y$.

50. (4) I. $x^2 - 107x + 221 = 0$
 or, $x^2 - 68x - 39x + 221 = 0$
 or, $4x(3x - 17) - 13(3x - 17) = 0$
 or, $(4x - 13)(3x - 17) = 0$

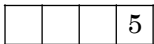
$$\therefore x = \frac{13}{4} \text{ or } \frac{17}{3}$$

II. $30y^2 - 49y + 20 = 0$
 or, $30y^2 - 24y - 25y + 20 = 0$
 or, $6y(5y - 4) - 5(5y - 4) = 0$
 or, $(6y - 5)(5y - 4) = 0$

$$\therefore y = \frac{5}{6} \text{ or } \frac{4}{5}$$

Comparing the values of x and y, we get $x > y$.

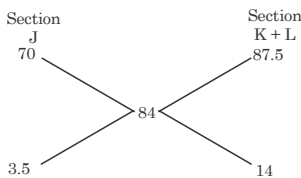
51. (2) The possible number of 4 digit numbers
 $= 4! = 4 \times 3 \times 2 = 24$
 If the number is divisible by 5 then the unit digit it self is 5.
 We put 5 at unit place and then remaining 3 places will be filled up in $3! = 3 \times 2 = 6$ ways



Hence, required probability

$$= \frac{6}{24} = \frac{1}{4}$$

52. (5)



$$J : (K + L) = 3.5 : 14 = 1 : 4$$

\therefore Number of students in section J

$$= J = \frac{1}{5} \times 100 = 20$$

53. (1) Required ratio of water and spirit

$$= \frac{xx_1(x_2 + y_2) + yy_2(x_1 + y_1)}{xy_1(x_2 + y_2) + yy_2(x_1 + y_1)}$$

$$\therefore \frac{xy_1(x_2 + y_2)}{yy_2(x_1 + y_1)}$$

where,

$$x_1 : y_1 = 3 : 4 ; x_2 : y_2 =$$

$$5 : 6 \text{ and } x : y = 2 : 3$$

$$= 2 \times 3(5 + 6) + 3 \times 5(3 + 4) : 2 \times 4(5 + 6) + 3 \times 6(3 + 4)$$

$$= 6 \times 11 + 15 \times 7 : 8 \times 11 + 18 \times 7$$

$$= 66 + 105 : 88 + 126$$

$$= 171 : 214$$

54. (4) Ratio of profit of P, Q and R after 3 years

$$= 1600 \times 36 : 2000 \times 36 : 1800 \times 28$$

$$= 72 : 90 : 63$$

$$= 8 : 10 : 7$$

\therefore share of R

$$= \frac{7}{25} \times 9500 = ₹ 2660$$

55. (3) Required original wages/wages before increment)

$$= \frac{\text{Increased daily wages}}{100 + \% \text{ increase}}$$

$$= \frac{78}{130} \times 100 = ₹ 60$$

56. (1) Let the present age of son be x years.

\therefore father's present age = $5x$ years.

Now,
 $5x + 3 = 4(x + 3)$
 or, $5x + 3 = 4x + 12$

$\therefore x = 9$ years
 \therefore Required answer = $x + 5x = 6x = 6 \times 9 = 54$ year

57. (1) Let the marked price be ₹x. Then,

$$x \left(40 + 30 - \frac{40 \times 30}{100} \right) - x$$

$$\left(45 + 20 - \frac{45 \times 20}{100} \right) = 24$$

$$\text{or, } \frac{58x}{100} - \frac{58x}{100} = 24$$

$$\text{or, } \frac{2x}{100} = 24$$

$$\text{or, } x = ₹ 1200$$

58. (4) 4 men = 8 boys
 or, 1 men = 2 boys

\therefore 6 men + 12 boys = $(12 + 12)$ boys = 24 boys

\therefore Required number of days

$$= \frac{8 \times 15}{24} = 5 \text{ days}$$

59. (2) Let the sum be ₹x.

$$\text{Then, } \frac{x \times 5 \times 2}{100} = 1600$$

$$\therefore x = ₹ 16000$$

\therefore compound interest

$$= 16000 \left(1 + \frac{5}{100} \right)^2 - 16000$$

$$= 16000 \left[\left(\frac{21}{20} \right)^2 - 1 \right]$$

$$= 16000 \times \frac{1}{20} \times \frac{41}{20} = ₹ 1640$$

$$\therefore \text{ Required difference} = 1640 - 1600 = ₹ 40$$

60. (1) $2\pi r = 352$

$$\Rightarrow r = \frac{352}{2\pi} = \frac{352}{2} \times \frac{7}{22} = 56 \text{ m}$$

Area of the road =

$$\pi(56)^2 - \pi(42)^2$$

$$= \frac{22}{7} \times 14 \times 98 = 4312 \text{ m}^2$$

61. (4) $20 \times 1 - 1 = 19$

$$19 \times 2 - 4 = 34$$

$$34 \times 3 - 9 = 93$$

$$93 \times 4 - 16 = 356$$

$$356 \times 5 - 25 = 1755$$

Hence, the wrong number is 95.

62. (1) $220 + 17 = 237$

$$237 - 19 = 218$$

$$218 + 23 = 241$$

$$241 - 29 = 212$$

$$212 + 31 = 243$$

$$243 - 37 = 206$$

Hence, the wrong number is 219.

63. (3) $100 + 1^2 = 101$

$$101 + 2^3 = 109$$

$$109 + 3^4 = 190$$

$$190 + 4^5 = 1214$$

$$1214 + 5^6 = 16839$$

Hence, the wrong number is 200.

64. (2) $20 \times 8 - 7 \times 3 = 139$

$$139 \times 7 - 6 \times 4 = 949$$

$$949 \times 6 - 5 \times 5 = 5669$$

$$5669 \times 5 - 4 \times 6 = 28321$$

$$28321 \times 4 - 3 \times 7 = 113263$$

Hence, the wrong number is 140.

65. (5) $8,899 \div 2 + 1.0 = 4450.5$

$$4450.5 \div 3 - 1.5 = 1482$$

$$1482 \div 4 + 2.0 = 372.5$$

$$372.5 \div 5 - 2.5 = 72$$

$$72 \div 6 + 3.0 = 15$$

Hence, the wrong number is 4450.

(66–68):

Man	Profession	Wife	Profssion
Sundaram	Engineer	Seema	Artist
Shivam	Lawyer	Shalu	Teacher
Satyam	Doctor	Sheela	Expert Writer

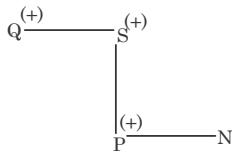
66. (3)

67. (3)

68. (5)

69. (3) Rest all are grains.

70. (4) BLADE
 71. (2) 72. (2) 73. (3) 74. (3) 75. (4)
 76. (4)



77. (3)

Hence, P is nephew of Q.

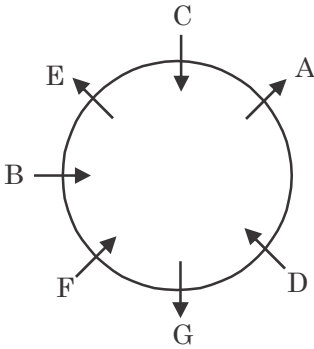
78. 3

79. (2) $14 P13 N12 R 4 Q 6 = ?$

or, $? = 14 + 13 - 12 \div 4 \times 6 = 27 - 18 = 9$

80. (5) All other are part of business.

(81–85):



81. (4) 82. (1) 83. (2) 84. (3) 85. (2)

86. (1) All doors are locks (A) + Some locks are keys (I) = A + I = No conclusion, but possibility holds true. Hence, conclusion I follows.

Again, Some locks are keys (I) + No key is room (E) = I + E = O = Some locks are not rooms. Hence, conclusion II does not follow.

87. (2) Some locks are keys (I) → conversion → Some keys are lock (I). Hence, conclusion I does not follow. Again, Some locks are keys (I) + No key is room (E) = I + E = O = Some locks are not room. Hence, conclusion II follows.

88. (4) Some atoms are molecules (I) → conversion → Some molecules are atoms (I). Hence, conclusion I does not follow.

Again, All molecules are elements (A). Hence, conclusion II does not follow.

89. (3) All molecules are elements (A) + No element is matter (E) = A + E = E = No molecule is matter. Hence, conclusion I does not follow. Hence, conclusion I does not follow. Again, from above, Some matters are molecules does not follow. Hence, conclusion II does not follow. But either I or II follows.

90. (5) Some computers are laptops

(I) thus the possibility of All laptops being computer holds true. Hence, conclusion I follows.

Again, Some computers are laptops (I) + All laptops are printers (A) = I + A = I = Some computers are printers → conversion → Some printers are computers. Hence, conclusion II follows.

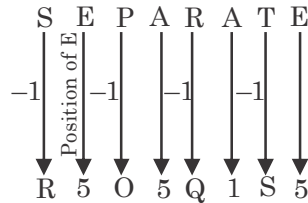
(91–96):

Persons	Floors	Games
Q	6th	Cricket
K	5th	Football
J	4th	Tennis
L	3rd	Hockey
P	2nd	Cricket
M	1st	Football

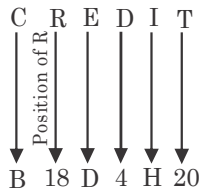
91. (2) 92. (3) 93. (4) 94. (5) 95. (3)

96. (4)

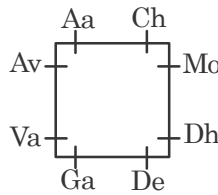
97. (2) As,



Similarly,



(98–100):



98. (3) 99. (3) 100. (2)