1. **MATHEMATICS**

**Directions (1–5) :** What will value of P in the following number series?

1. 12 6.5 7.5 12.75 ?
   (a) 22.575 (b) 216.75 (c) 209.75 (d) 236.75 (e) 249.75
2. 16 24 36 54 81 121.5 ?
   (a) 182.25 (b) 174.85 (c) 190.65 (d) 166.55 (e) 158.95
3. 12 12 18 45 180 1170 ?
   (a) 13485 (b) 14675 (c) 15890 (d) 16756 (e) 12285
4. 22 23 27 36 52 77 ?
   (a) 111 (b) 109 (c) 113 (d) 117 (e) 115
5. 16 14 24 66 256 1270 ?
   (a) 8564 (b) 5672 (c) 4561 (d) 7608 (e) 6340

**Directions (6–10) :** Study the following Pie chart carefully and answer the questions given below.

Percentage of various professionals in a town and percentage of female professionals among them.

- **Total professionals in the town = 10500**

   - Architects = 11%
   - Engineers = 20%
   - Teachers = 10%
   - Lawyers = 19%
   - Doctors = 5%
   - Designers = ?

   - The percentage of Engineers is to 2% more than diseneer and 3% less than doctor

<table>
<thead>
<tr>
<th>Percentage of female Professionals</th>
<th>Doctors</th>
<th>20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architects</td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td>Engineers</td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td>Teachers</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>Lawyers</td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td>Designers</td>
<td>35%</td>
<td></td>
</tr>
</tbody>
</table>

6. What is the ratio of the male Engineers and Designers to the same occupation female professionals in the town?
   (a) 41 : 44 (b) 55 : 53 (c) 31 : 35 (d) 44 : 35 (e) None of these

7. The total number of Lawyers in town is approximately what per cent of the total number of Doctors in the town?
   (a) 95 (b) 98 (c) 90 (d) 85 (e) 81

8. What is the difference between the total number of males and females professionals in the town?
   (a) 1284 (b) 1134 (c) 1054 (d) 1164 (e) None of these

9. Female Doctors are what percent of the female teachers in the town?
   (a) 42 (b) 28 (c) 15 (d) 35 (e) None of these

10. What is the ratio of the number of male Architects to the number of male teachers in the town?
    www.currentaffairstoday.in www.ibpsadda.com www.gurujobalert.com

**Directions (11–15) :** In the following questions two equations are given. You have to solve both the equations and give answer:

11. \( x^2 + 3x + 2 = 0 \)
    (a) \( x = 1 \) (b) \( x = -2 \) (c) \( x = -1 \) (d) \( x = 2 \) (e) None of these

12. \( 16^2 = 1 \)
    (a) \( x = 4 \) (b) \( x = -4 \) (c) \( x = 1 \) (d) \( x = 0 \) (e) None of these

13. \( x = \sqrt{10648} \)
    (a) \( x = 103 \) (b) \( x = 104 \) (c) \( x = 102 \) (d) \( x = 105 \) (e) None of these

14. \( \frac{34 - 12}{\sqrt{x}} = 4 \)
    (a) \( x = 9 \) (b) \( x = 16 \) (c) \( x = 100 \) (d) \( x = 144 \) (e) None of these

15. \( x^2 + 12x + 35 = 0 \)
    (a) \( x = -7 \) (b) \( x = -5 \) (c) \( x = 3 \) (d) None of these (e) None of these

16. The average age of boys in class is 16.66 years, while the average age of girls is 18.75 years and the average age of all the 40 students of the class is 17.5 years. If the difference between the no. of boys and girls is 8, then find the no. of girls in the class.
    (a) 12 (b) 15 (c) 18 (d) Data insufficient (e) None of these

17. A man’s age is 125% of what it was 10 years ago, but 83 \( \frac{1}{3} \) % of what it will be after 10 years. What is his present age?
    (a) 45 years (b) 50 years (c) 55 years (d) 60 years (e) None of these

18. A’s speed is \( 1 \frac{1}{2} \) times B’s. In a race B a strat of 300 m ahead of A. How long should the race course be so that both reach the winning post simultaneously?
    (a) 700 m (b) 900 m (c) 800 m (d) 850 m (e) None of these

19. A sum of money is to be divided among A, B and C in the respective ratio \( 3 : 4 : 5 \) and another sum of money is to be divided between E and F equally. If F got \( \text{Rs} \) 1050 less than A, how much amount did B receive?
    (a) \( \text{Rs} \) 750 (b) \( \text{Rs} \) 2000 (c) \( \text{Rs} \) 1500 (d) Can’t be determined (e) None of these

20. A man can row \( 9 \frac{1}{3} \) km/hr in still water and he finds that it takes him thrice as much time to row upstream as to row downstream (same distance). The speed of the current is:
    (a) \( \frac{3}{4} \) km/hr (b) \( \frac{3}{9} \) km/hr (c) \( \frac{1}{4} \) km/hr (d) \( \frac{2}{3} \) km/hr (e) None of these

21. Ravi invested \( \text{Rs} \) 6,250 in shares of a company paying 6% dividend per annum. If he bought \( \text{Rs} \) 25 shares for \( \text{Rs} \) 31.25 each. Find his income from the investment.
    (a) \( \text{Rs} \) 200 (b) \( \text{Rs} \) 300 (c) \( \text{Rs} \) 250 (d) \( \text{Rs} \) 500 (e) None of these

**Directions (22–25) :** What approximate value should come in place of question mark (\( ? \)) in the following questions:

22. \( 456.675 + 35.7683 \times 67.909 - 58.876 = ? \)
    (a) \( 33382 \) (b) \( 3587 \) (c) \( 1540 \) (d) \( 2756 \) (e) \( 2830 \)

23. \( (52.36)^4 = ? \)
    (a) \( 129600 \) (b) \( 138850 \) (c) \( 143550 \) (d) \( 165790 \) (e) \( 177370 \)
24. \( \sqrt{100000} = ? \)
   (a) 260  (b) 277  (c) 284  
   (d) 300  (e) 316  
25. \( 664\% \text{ of } 212 = 394 = ? \)
   (a) 3  (b) 9  (c) 18  
   (d) 21  (e) 24  

Directions (26–30) : Study the following table carefully to answer these questions.

<table>
<thead>
<tr>
<th>Department</th>
<th>Organisation A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR</td>
<td>145</td>
<td>80</td>
<td>120</td>
<td>180</td>
<td>160</td>
</tr>
<tr>
<td>Finance</td>
<td>75</td>
<td>100</td>
<td>220</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>Marketing</td>
<td>150</td>
<td>90</td>
<td>115</td>
<td>200</td>
<td>190</td>
</tr>
<tr>
<td>IT</td>
<td>225</td>
<td>110</td>
<td>180</td>
<td>280</td>
<td>220</td>
</tr>
<tr>
<td>Administration</td>
<td>180</td>
<td>120</td>
<td>130</td>
<td>110</td>
<td>130</td>
</tr>
</tbody>
</table>

26. What is the average number of employees working in Marketing department of all the organisations?
   (a) 149  (b) 145  (c) 146  
   (d) 148  (e) None of these  
27. What is the total number of employees working in all the departments of organisation B together?
   (a) 350  (b) 375  (c) 425  
   (d) 475  (e) None of these  
28. What is the ratio between number of employees from Finance and Marketing departments together of organisation B and these two departments together of organisation D respectively?
   (a) 14 : 9  (b) 9 : 14  (c) 11 : 28  
   (d) 28 : 11  (e) None of these  
29. What is the ratio between the total number of employees from all organisations together in HR and Administration departments respectively?
   (a) 132 : 137  (b) 137 : 132  (c) 122 : 137  
   (d) 137 : 122  (e) None of these  
30. Number of employees in IT department of organisation C is what percent of the total number of employees in organisation C in all the departments together?
   (a) 26.5  (b) 25.6  (c) 25.4  
   (d) 26.4  (e) None of these  
31. Three measuring rods are 64 cm, 80 cm and 96 cm in length. The length of cloth that can be measured exactly by using any one of the above rods is:
   (a) 98 m  (b) 19.20 m  (c) 9.60 m  
   (d) 96 m  (e) None of these  
32. \( \frac{1}{3} \) of the class wants to go for Picnic to Patna and \( \frac{1}{2} \) the class wants to go Gaya and the others are neutral. If the no. of students who are neutral is less by 10 than those who want to go to Gaya, how many students want to go to Patna?
   (a) 10  (b) 20  (c) 30  
   (d) 40  (e) None of these  
33. The ratio between the profit and selling price of a commodity is 1 : 4. What will be the ratio between selling price and cost price?
   (a) 4 : 3  (b) 3 : 4  (c) 2 : 3  
   (d) 4 : 5  (e) None of these  
34. How many kg of apples costing \( \text{Rs} \ 15 \) per kg must be mixed with 15 kg of another costing \( \text{Rs} \ 8 \) per kg by selling at \( \text{Rs} \ 11.50 \) kg with a profit of 15%?
   (a) \( \text{Rs} \ 10 \)  (b) \( \text{Rs} \ 11.5 \)  (c) \( \text{Rs} \ 12 \)  
   (d) \( \text{Rs} \ 15 \)  (e) None of these  
35. 3 years ago the average age of a family of 5 members was 17 years. A boy having been born, the average age of the family is same today as it was 3 years ago. What is the age of the boy?
   (a) 3 yrs  (b) 4 yrs  (c) 2 yrs  
   (d) 7 yrs  (e) None of these

**1. संख्यात्मक अभियोजन**

निर्देश (1–5) : निम्न तालिका में \( P \) का मान ज्ञात कर उस पर आधारित प्रश्नों के उत्तर दीजिए:

<table>
<thead>
<tr>
<th>No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12</td>
<td>6.5</td>
<td>7.5</td>
<td>12.75</td>
<td>27.5</td>
</tr>
<tr>
<td>2</td>
<td>16</td>
<td>24</td>
<td>36</td>
<td>54</td>
<td>81</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>18</td>
<td>45</td>
<td>180</td>
<td>1170</td>
</tr>
<tr>
<td>4</td>
<td>22</td>
<td>23</td>
<td>36</td>
<td>52</td>
<td>77</td>
</tr>
<tr>
<td>5</td>
<td>16</td>
<td>14</td>
<td>24</td>
<td>66</td>
<td>256</td>
</tr>
</tbody>
</table>

(1–5) :  निम्न तालिका में \( P \) का मान ज्ञात कर उस पर आधारित प्रश्नों के उत्तर दीजिए:

<table>
<thead>
<tr>
<th>No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>111</td>
<td>109</td>
<td>113</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>117</td>
<td>115</td>
<td>?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>111</td>
<td>12285</td>
<td>?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>8564</td>
<td>5672</td>
<td>4561</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>7008</td>
<td>6340</td>
<td>?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(6–10) : निम्न तालिका में \( P \) का मान ज्ञात कर उस पर आधारित प्रश्नों के उत्तर दीजिए:

एक क्षेत्र में विभिन्न पेशेवरों का प्रतिशत उनमें महिला पेशेवरों का प्रतिशत, क्षेत्र में कुल पेशेवरों की संख्या = 10500

**Note** – महिला का प्रतिशत डिजाइनर से 2% अधिक एवं डिक्टर से 3% कम है।

<table>
<thead>
<tr>
<th>महिला पेशेवरों का प्रतिशत</th>
</tr>
</thead>
<tbody>
<tr>
<td>डिक्टर</td>
</tr>
<tr>
<td>महिला</td>
</tr>
<tr>
<td>वास्तुकार</td>
</tr>
<tr>
<td>अध्यापक</td>
</tr>
<tr>
<td>वकील</td>
</tr>
<tr>
<td>डिजाइनर</td>
</tr>
</tbody>
</table>

6. क्षेत्र के पूर्व महिला पेशेवरों व डिजाइनरों की संख्या तथा इसी व्याख्या में कार्य करने वाली महिला पेशेवरों की बीच का अनुपात है?
   (a) 41 : 44  (b) 55 : 53  (c) 31 : 35  
   (d) 44 : 35  (e) इनमें से कोई नहीं  
7. क्षेत्र में वकीलों की कुल संख्या, क्षेत्र में डिक्टरों की कुल संख्या का तुलना किसने प्रतिशत है?
   (a) 95  (b) 98  (c) 90  
   (d) 85  (e) 81  
8. क्षेत्र में पूर्व पेशेवरों की कुल संख्या तथा महिला पेशेवरों की कुल संख्या के बीच अन्तर क्या है?
   (a) 1284  (b) 1134  (c) 1054  
   (d) 1164  (e) इनमें से कोई नहीं  
9. क्षेत्र में महिला डिक्टर, महिला वकील डिजाइनर का प्रतिशत प्रतिशत है?
10. In a class, there are 50 students. If 25 of them are girls and 25 are boys, what is the ratio of girls to boys?
(a) 1:1
(b) 25:25
(c) 25:1
(d) Cannot be determined from the given information.

11. If \( x^2 + 5x + 6 = 0 \), what is the value of \( y^2 + 3y + 2 = 0 \)?
(a) 0
(b) 1
(c) 2
(d) 3

12. Simplify \( \sqrt{16x^2} = \frac{4\sqrt{x}}{16} \). What is the value of \( \frac{4\sqrt{x}}{16} \)?
(a) \( \frac{4\sqrt{x}}{16} \)
(b) \( \frac{x}{16} \)
(c) \( \frac{1}{4\sqrt{x}} \)
(d) \( \frac{1}{16} \)

13. Evaluate \( x = 10648 \). What is the value of \( y = \pm \sqrt{484} \)?
(a) \( x = 10648 \)
(b) \( y = 24 \)
(c) \( y = -24 \)
(d) \( x = 10648 \) and \( y = -24 \)

14. If \( x^2 + 12x + 35 = 0 \), what is the value of \( 2y^2 + 22y + 56 = 0 \)?
(a) \( x^2 + 12x + 35 = 0 \)
(b) \( 2y^2 + 22y + 56 = 0 \)
(c) \( 2y^2 + 22y + 56 = 0 \)
(d) Cannot be determined from the given information.

15. If \( A \) is the area of a rectangle and \( B \) is the area of a square, what is the ratio of \( A : B \)?
(a) \( \frac{1}{2} \)
(b) 1
(c) 2
(d) Cannot be determined from the given information.

16. If \( F \) is the force acting on an object and \( S \) is the work done, what is the formula for \( F \)?
(a) \( F = \frac{S}{t} \)
(b) \( F = \frac{W}{t} \)
(c) \( F = \frac{W}{S} \)
(d) \( F = \frac{S}{W} \)

17. If \( x + y = 10 \) and \( x - y = 5 \), what is the value of \( x + y \)?
(a) 5
(b) 10
(c) 15
(d) Cannot be determined from the given information.

18. If \( A \) is the area of a circle and \( B \) is the area of a square, what is the ratio of \( A : B \)?
(a) \( \frac{\pi}{4} \)
(b) \( \frac{\pi}{2} \)
(c) \( \pi \)
(d) Cannot be determined from the given information.

19. If \( F \) is the force acting on an object and \( S \) is the work done, what is the formula for \( F \)?
(a) \( F = \frac{S}{t} \)
(b) \( F = \frac{W}{t} \)
(c) \( F = \frac{W}{S} \)
(d) Cannot be determined from the given information.

20. If \( x = \frac{1}{3} \) and \( y = \frac{1}{2} \), what is the value of \( x + y \)?
(a) \( \frac{5}{6} \)
(b) \( \frac{1}{6} \)
(c) \( \frac{2}{3} \)
(d) Cannot be determined from the given information.

21. If \( x = 10 \) and \( y = 5 \), what is the value of \( x^2 + y^2 \)?
(a) 100
(b) 125
(c) 150
(d) Cannot be determined from the given information.

22. If \( A \) is the area of a square and \( B \) is the area of a rectangle, what is the ratio of \( A : B \)?
(a) \( \frac{1}{2} \)
(b) \( \frac{1}{4} \)
(c) \( \frac{1}{8} \)
(d) Cannot be determined from the given information.

23. If \( x = 5 \) and \( y = 3 \), what is the value of \( x^2 + y^2 \)?
(a) 25
(b) 36
(c) 49
(d) Cannot be determined from the given information.

24. If \( x = 10 \) and \( y = 5 \), what is the value of \( x^2 + y^2 \)?
(a) 125
(b) 165
(c) 215
(d) Cannot be determined from the given information.

25. If \( x = 2 \) and \( y = 3 \), what is the value of \( x^2 + y^2 \)?
(a) 13
(b) 17
(c) 21
(d) Cannot be determined from the given information.

26. If \( A \) is the area of a square and \( B \) is the area of a rectangle, what is the ratio of \( A : B \)?
(a) \( \frac{1}{2} \)
(b) \( \frac{1}{4} \)
(c) \( \frac{1}{8} \)
(d) Cannot be determined from the given information.

27. If \( x = 10 \) and \( y = 5 \), what is the value of \( x^2 + y^2 \)?
(a) 225
(b) 250
(c) 275
(d) Cannot be determined from the given information.

28. If \( A \) is the area of a square and \( B \) is the area of a rectangle, what is the ratio of \( A : B \)?
(a) \( \frac{1}{2} \)
(b) \( \frac{1}{4} \)
(c) \( \frac{1}{8} \)
(d) Cannot be determined from the given information.

29. If \( x = 10 \) and \( y = 5 \), what is the value of \( x^2 + y^2 \)?
(a) 150
(b) 175
(c) 200
(d) Cannot be determined from the given information.

30. If \( x = 10 \) and \( y = 5 \), what is the value of \( x^2 + y^2 \)?
(a) 125
(b) 150
(c) 175
(d) Cannot be determined from the given information.

31. If \( x = 10 \) and \( y = 5 \), what is the value of \( x^2 + y^2 \)?
(a) 150
(b) 175
(c) 200
(d) Cannot be determined from the given information.
Directions (36–37) : Read the given information carefully and answer the given questions :

Each of the six friends P, Q, R, S, T and U has a different weight. P is heavier than T but lighter than U. Q is lighter than only P. T is not the lightest. T’s weight 50 kg. The one whose weight could possibly be 49 kg ?

(a) S (b) Q (c) P (d) R (e) U

36. Whose weight could possibly be 49 kg ?

(a) S (b) Q (c) P (d) R (e) U

37. Which of the following weights correctly represents possible weight of R ?

(a) 65 kg (b) 48 kg (c) 67 kg (d) 61 kg (e) 63 kg

Directions (38–39) : Study the following information carefully and answer the questions given below :
P is to the north of Q and S is to the east of P, who is to the south of W. T is to the west of P.

38. Who among the following is towards south of W and north of Q ?

(a) P (b) T (c) S (d) Q (e) None of these

39. W is in which direction with respect to T ?

(a) North (b) North-East (c) South-West (d) West (e) None of these

Directions (40–45) : Study the following information carefully to answer the given questions :

Eight persons from different banks, viz UCO Bank, Syndicate Bank, Canara Bank, PNB, Dena Bank, Oriental Bank of Commerce, Indian Bank and Bank of Maharashtra, are sitting in two parallel rows containing four people each, in such a way that there is an equal distance between adjacent persons. In row 1 A, B, C and D are seated and all of them are facing south. In row 2 P, Q, R and S are seated and all of them are facing north. Therefore, in the given seating arrangement each member seated in a row faces another member of the other row. (All the information given above does not necessarily represent the order of seating as in the final arrangement.)

- C sits second to right of the person from Bank of Maharashtra. R is an immediate neighbour of the person who faces the person from Bank of Maharashtra.
- Only one person sits between R and the person from PNB. The immediate neighbour of the person from PNB faces the person from Canara Bank.
- The person from UCO bank faces the person from Oriental Bank of Commerce. R is not from Oriental Bank of Commerce. P is not from PNB. P does not face the person from Bank of Maharashtra.
- Q faces the person from Dena Bank. The one who faces S sits to the immediate left of A.
- B does not sit at any of the extreme ends of the line. The person from Bank of Maharashtra does not face the person from Syndicate Bank.

40. Which of the following is true regarding A?

(a) The person from UCO Bank faces A.
(b) The person from Bank of Maharashtra is an immediate neighbour of A.
(c) A faces the person who sits second to the right of R.
(d) A is from Oriental Bank of Commerce
(e) None of these

41. Who is seated between R and the person from PNB?

(a) The person from Oriental Bank of Commerce
(b) P
(c) Q
(d) The person from Syndicate Bank
(e) S

42. Who amongst the following sit at extreme ends of the rows?

(a) D and the person from PNB
(b) The persons from Indian Bank and UCO Bank
(c) The person from Dena Bank and P
(d) The persons from Syndicate Bank and D
(e) None of these

43. Who amongst the following faces the person from Bank of Maharashtra?

(a) The person from Indian Bank
(b) P
(c) Q
(d) The person from Syndicate Bank
(e) None of these

44. P is related to Dena Bank in the same way as B is related to PNB based on the given arrangement. Who amongst the following is D related to, following the same pattern?

(a) Syndicate Bank
(b) Canara Bank
(c) Bank of Maharashtra
(d) Indian Bank
(e) None of these

45. Four of the following five are alike in a certain way based on the given seating arrangement and thus form a group. Which is the one that does not belong to that group?

(a) Canara Bank
(b) R
(c) Syndicate Bank
(d) Q
(e) Oriental Bank of Commerce

Directions (46–50) : In the following questions, the symbols @, $, © and % are used with the following meaning as illustrated below :

- ‘P $ Q’ means ‘P is not smaller than Q’.
- ‘P © Q’ means ‘P is not greater than Q’.
- ‘P % Q’ means ‘P is neither greater than nor equal to Q’.
- ‘P ¤ Q’ means ‘P is neither greater than nor smaller than Q’.

Now, in each of the following questions, assuming the given statements to be true, find which of the four conclusions I, II, III and IV given below them is/are definitely true and give your answer accordingly.

46. Statements : R © J, J $ D, D @ K

Conclusions : I. T @ D II. T © D III. R © K IV. J $ T

(a) Only either I or II is true.
(b) Only III is true
(c) Only III and IV are true.

www.currentaffairstoday.in
www.ibpsadda.com
www.gurujobalert.com
56. Who amongst the following sits on the immediate right of H?
(a) A  (b) D  (c) C
(d) G  (e) None of these

57. Who amongst the following sits third to the right of A?
(a) D  (b) E  (c) F
(d) A  (e) None of these

58. Four of the following five are alike in a certain way, based on the information given above and so form a group. Which of the following does not belong to this group?
(a) HA  (b) FH  (c) GC
(d) DA  (e) AE

59. If all the people are made to sit in an alphabetical order, in clockwise direction starting from A, the position of whom amongst the following remain the same (excluding A)?
(a) E  (b) F  (c) C
(d) G  (e) None of these

60. Who amongst the following sits exactly between F and C (and is also their neighbour)?
(a) E  (b) B  (c) B
(d) A  (e) None of these

Directions (61–63) : Study the following information carefully and answer the given questions:

There is a building of nine floors numbered 1 to 9. The ground floor is numbered 1, the floor above it is numbered 2, and so on, and the topmost floor is numbered 9. The building has nine cars of different colours, blue, grey, red, orange, green, black, yellow, pink, and white, but not necessarily in the same order. The building has nine floors and only persons stays on one floor. All of them own one car each, and each car is of a different colour, i.e., blue, grey, red, orange, green, black, yellow, pink, and white, but not necessarily in the same order. The ground floor is numbered 1, the floor above it is numbered 2, and so on, and the topmost floor is numbered 9.

1. A person who owns an orange-coloured car stays on the floor on which H stays. The one who owns an orange–coloured car stays on the fourth floor. E stay on the second floor.
2. M @ B, B © K, K % M
3. I. M @ B, B # N, N $ R, R © K
4. II. F # H, H @ M, M © E, E $ J
5. III. J © M

Conclusions
(a) Only I, II, III and IV are true
(b) Only I, II and III are true
(c) Only I and II are true
(d) Only II and III are true
(e) None of these

Directions (64–65) : Study the information given below and answer the given questions:

Study the information given below and answer the given questions:

In a certain code ‘health problems on rise’ is coded as ‘mlp hlt ngi snk’, ‘health problems on rise’ is coded as ‘hlt sa rtv mlp’, ‘rise with every challenge’ is coded as ‘snk rtv Ine riy’ and ‘facing challenge every day’ is coded as ‘ngi riy nop hus’.

51. What could be a code for “Ine”? (a) facing  (b) with  (c) every  (d) rise  (e) challenge
52. “riy rtv rai” could be a code for which of the following? (a) rise above challenge  (b) rise health challenge  (c) day rise challenge  (d) with rise challenge  (e) challenge every rise
53. Which of the following is the code for “facing”? (a) nop  (b) rtv  (c) ngi  (d) snk  (e) sa
54. “riy snk mlp” could be a code for which of the following? (a) problem every day  (b) challenge with health  (c) with health day  (d) every challenge facing  (e) challenge facing with
55. Which of the following is the code for ‘day’? (a) riy  (b) nop  (c) ngu  (d) hus  (e) Cannot be determined

Directions (66–70) : Study the information given below and answer the given questions:

Eight friends A, B, C, D, E, F, G, and H are sitting in a circle, but not necessarily in the same order. Four of them are facing outside and four of them are facing the centre.

E faces outside. Both the immediate neighbours of E face the centre.
H sits second to the right of E. B sits third to the left of E.
D faces the centre. Both the immediate neighbours of D face outside.
G sits second to the left of A. B sits third to the right of H.

~ 5 ~
65. Who amongst the following owns the green–coloured car?
(a) D
(b) J
(c) G
(d) F
(e) None of these

66. Who amongst the following stays on the topmost floor?
(a) F
(b) G
(c) D
(d) C
(e) None of these

67. A owns a car of which of the following colours?
(a) Orange
(b) Pink
(c) Yellow
(d) Blue
(e) None of these

68. Who stays on the floor which is exactly between the floor on which H stays and the floor on which A stays?
(a) B
(b) G
(c) C
(d) F
(e) None of these

69. How many floors are there between the floor on which J stays and the floor on which C stays?
(a) One
(b) Two
(c) None
(d) Three
(e) More than three

70. Which of the following is true as per the given information?
(a) F stays on the eighth floor.
(b) The one who owns the blue car stays on the topmost floor.
(c) The floor on which F and G stay is the same.
(d) F does not stay on the ground floor.
(e) None of these

40. A owns a car of which of the following colours?
(a) Blue
(b) Green
(c) Pink
(d) Orange
(e) None of these

41. R and PNB are the banks of which of the following?
(a) UCO Bank
(b) HDFC Bank
(c) Dena Bank
(d) SBI Bank
(e) None of these

42. In which of the following cases is the number of participants the same as the number of floors?
(a) PNB Bank
(b) HDFC Bank
(c) Dena Bank
(d) SBI Bank
(e) None of these

43. In which of the following cases is the number of participants more than the number of floors?
(a) PNB Bank
(b) HDFC Bank
(c) Dena Bank
(d) SBI Bank
(e) None of these

44. Who amongst the following owns the green–coloured car?
(a) C
(b) F
(c) G
(d) None of these
(e) Information not available

45. Which of the following is true as per the given information?
(a) C also stays on the same floor as the floor on which N stays.
(b) F stays on the topmost floor.
(c) N stays on a floor immediately above the floor on which H stays.
(d) F stays on the eighth floor.
(e) None of these
52. “riy rty roi”निम्न में से किस कोड हो सकता है?
(a) rise above challenge (b) rise health challenge (c) day rise challenge (d) with rise challenge (e) challenge every rise
53. निम्न में से ‘facing का कोड कौन-सा है?
(a) nop (b) rty (c) ngi (d) snk (e) sa
54. “riy snk mpl”निम्न में से किसका कोड हो सकता है?
(a) problem every day (b) challenge with health (c) with health day (d) every challenge facing (e) इनमें से कोई नहीं
55. निम्न में से ‘day’ का कोड कौन-सा है?
(a) riy (b) nop (c) ngi (d) hus (e) नहीं कर सकते

56. निम्न में से H को किस बाल में कौन बैठा है?
(a) A (b) B (c) C (d) F (e) G

57. निम्न में से A के दाएँ को किससे स्थान पर कौन बैठा है?
(a) D (b) E (c) C (d) G (e) इनमें से कोई नहीं

58. कुंद दी गई जानकारी के आधार पर निम्नलिखित पांच में से चार किमिन प्रकार समाप्त है इसलिए उनका एक समूह बनता है। वह एक कोड-सा है जो इस समूह में नहीं आता?
(a) HA (b) PH (c) GC (d) DA (e) AE

59. गर्भ सभी यथास्थिति के घड़ी की दिशा में, A से आघंक करके वर्णक्रम में बिंदु जाए, तो निम्न में से इसका स्थान एक समीकरण होगा? (A को घोड़स्करा?)
(a) E (b) F (c) C (d) G (e) इनमें से कोई नहीं

60. निम्न में से F व C के तीन बीच में कौन बैठा है (और उनके बाल में भी)?
(a) E (b) G (c) A (d) ph (e) इनमें से कोई नहीं

नियंत्रण (61–63) : नियन्त्रित सूचनाओं का व्यापारीक अभ्यास कारकों और दिये गए प्रश्नों के उत्तर में:

P = Q का मतलब है P, Q को मां और
P + Q का मतलब P, Q का फिरा है।
P × Q का मतलब P, Q का बन्ध है।
P − Q का मतलब P, Q का भाई है।
61. Pratnabachh chid (?) of the jageh par kya rakh jaye, jisse se ye jate hoo, kyun ko, T ko cha asa hoo?

N + R ? S x T
(a) yaa to ‘+’ yaa ‘-’
(b) keval ‘-’
(c) yaa to ‘-’ yaa ‘+’
(d) keval ‘+’
(e) isme se koi nahi

62. Ditye yake jyotishku m V aur Y ko bich kya samadh hai?

V + W - M + Y × S
(a) V, Y ko anideh hai
(b) V, Y ko pura hai
(c) V, Y ko cha asa hai
(d) isme se koi nahi

63. Ditye yeh jyotishku m N, L se kisi samadh hai?

N + O = T - L
(a) cha asa
(b) anideh
(c) edhe dorr
(d) nishyanti nahi cha ja sakta (e) isme se koi nahi

64. Nisyanalikshen m se pratnabachh chid k m jageh par kya hoga jo angewadi varnakram shukhatu ko poot kare?

AN CQ ET GW ?
(a) HZ
(b) GY
(c) IZ
(d) HY
(e) IX

Nishter (65-70): Nichee do gai jankaroi ko phalje udeiye aur dhey yeh prastubh ko uttar dhijne:


65. Nisam m se haro rong ko kar kiske paresa hai?

(a) D
(b) J
(c) G
(d) F
(e) isme se koi nahi

66. Nisam m se sabse uprvi ko jyotish per koone raha hai?

(a) F
(b) G
(c) D
(d) C
(e) isme se koi nahi

67. A ko paro nisam m se kis rong ko kar hai?

(a) naria
(b) gulaam
(c) nila
(d) isme se koi nahi

68. Jyotish jyotish par H raha hai udeiye jyotish jyotish par A raha hai uskene kahan karoni ko jyotish par koone raha hai?

(a) C
(b) B
(c) G
(d) F
(e) isme se koi nahi

69. Jyotish jyotish par J raha hai, udeiye jyotish jyotish par C raha hai, uskene karoni ko jyotish hai?

(a) a
(b) d
(c) a
(d) teen
(e) teen se adhik

70. Yeh ziyada ko anusar se nisam m se koone samad hai?

(a) H
(b) J
(c) A
(d) B
(e) C

Directions (71–75): Read each sentence to find out whether there is any error in it. The error, if any, will be in one part of the sentence. The number of that part is the answer. If there is no error, the answer is ‘e’ (Ignore the errors of punctuation, if any):

71. Avinash and his friend (a)/ were walking towards (b)/ the station when (c)/ they met his common friend. (d)/ No error (e)/

72. Priyamva was unhappy (a)/ to hear the news (b)/ of her son’s failing (c)/ in the final examination. (d)/ No error (e)/

73. The moment Vighnesh was (a)/ admitted to the hospital (b)/ the warden decided (c)/ to inform his parents. (d)/ No error (e)/

74. For expecting the company to pay (a)/ for the transport (b)/ of the personal furniture of the employee (c)/ was not fair. (d)/No error (e)/

75. Aditi was unable (a)/ to support her parent (b)/ even though both of them (c)/ had no income of their own. (d)/ No error (e)/

Directions (76–85): Read the following passage carefully and answer the questions given below it:

The implicit rationale for or the philosophical foundation of the intellectual property rights system in India is embodied in three underlying objectives. First, it seeks to strike a balance between the interests of producers on the one hand and consumers on the other, that is, those who develop the scientific knowledge or innovate and those who use the goods or services derived there from. Needless to say, every country attempts the same, but where the balance is reached depends on the level of development. The levels of income in the economy and the stage of development in the society are thus particularly important in this context.

The logic of exclusions from patentability follows from this objective. Methods of horticulture and agriculture, as also food, are excluded because such a large proportion of the population is dependent on agriculture or a livelihood and the purchasing power of the poor even for food is limited, while drugs and medicines are excluded because millions do not have access to basic health care.

Second, it endeavours to ensure rewards for the owners of knowledge or the innovators but, at the same time, aims to place a limitation on the monopoly profits or the quasi-rents which may be appropriated by the entity that commercializes the technology or transforms the scientific knowledge into a marketable product. This is the logic of compulsory licensing. There are two underlying principles set out in the Patent Act: patents are granted to encourage inventions and to secure that the inventions are worked in India and patents are not granted merely to enable patentees to enjoy a monopoly for

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the importation of the patented article.

Third, it attempts to create an environment which is conducive for the diffusion of existing technologies and the development of new technologies, in so far as technology is a basic determination of development in a society that is a late comer to industrializations. The patentability of process alone, but not products, in some sectors and the reduced form of protection for patents derives from this objective.

76. Which of the following, according to the passage, are excluded from the patent Act?
(a) Food, drugs and medicines
(b) Drugs, medicines and clothes
(c) Medicines and mineral products
(d) Food and computers
(e) None of these

77. Which of the following words has the same meaning to the word ‘stage’ as used in the passage?
(a) level  (b) norm  (c) condition
(d) status  (e) theatre

78. What, according to the passage, is the first objective of the intellectual property rights system?
(a) To help the innovator to become rich
(b) To bring in harmony between the innovator and the user
(c) To restrict unauthorized use
(d) To help the country to prosper
(e) To restrict unauthorized spread of the products

79. What, according to the passage, is the main determination for bringing in balance in intellectual property rights system in a country?
(a) Political structure
(b) Population size
(c) Agricultural production
(d) Independence in food products
(e) Level of development

80. Which of the following words has the same meaning to the word ‘enjoy’ as used in the passage?
(a) entertain  (b) deserve  (c) pleasure
(d) restrict  (e) experience

81. Which of the following best describes the sentence “This is the logic of compulsory licensing” as given in the passage?
(a) To commercialize the technological innovations
(b) To bring in uniformity in distribution
(c) To enforce control over profit-making
(d) To help the users get the products
(e) None of these

82. Which, according to the passage, is one of the underlying principles of the Patents Act?
(a) To instil encouragement for innovations
(b) To restrict unauthorized use
(c) To enable the innovators to gain maximum profit
(d) To help Government earn taxes
(e) None of these

83. Why, according to the passage, are methods of horticulture and agriculture excluded from patentability?
(a) Because the law does not provide for the same
(b) Because a large part of the population is dependent on those
(c) Because the Government does not have enough machinery to control
(d) Because the international law does not prescribe for the same
(e) None of these

84. What, according to the passage, is the third objective of the intellectual property rights system?
(a) To restrict profit earning by the innovators
(b) To create a conducive environment for development of new technology and advancement of existing technology
(c) To strike a balance between demand and supply
(d) To protect people from various products
(e) None of these

85. Which, according to the passage, is envisaged as one of the basic determinants of development of a country?
(a) Agriculture  (b) Food  (c) Medicine
(d) Horticulture  (e) Technology

Directions (86–90) : Each sentence below has two blanks, each blank indicating that something has been omitted. Choose the words that best fit the meaning of the sentence as a whole:

86. It is clear that the US does not .......... itself answerable to world .......... .
(a) consider, opinion  (b) bow, order
(c) adhere, demand  (d) deemed, favour
(e) recognise, fraternity

87. Terrorism is a .......... that still .......... us.
(a) menace, strike  (b) problem, evades
(c) burden, load  (d) misery, pain
(e) bane, afflicts

88. Decades of uncontrolled illegal .......... from Bangladesh .......... the proportions of a demographic invasion years ago.
(a) occupancy, managed  (b) flow, resulted
(c) settlement, changed  (d) immigration, acquired  (e) entry, drove

89. While modernising India, the rural .......... has to be taken into .......... first.
(a) folk, considered  (b) area, confidence
(c) population, care  (d) populace, priority
(e) sector, view

90. The current worldwide .......... of Islamic terrorism make the task of .......... this menace immensely difficult.
(a) support, avoiding  (b) links, countering
(c) backing, solving  (d) trade, averting
(e) operation, supporting

Directions (91–95) : Rearrange the following seven sentences A, B, C, D, E, F and G in the proper sequence to form a meaningful paragraph and then answer the questions given below.

A. Wild apricot fruits are attractive, delicious and highly nutritious.
B. In the Himalayan region of the country, local communities know it by different vernacular names, viz “Chulli”, “Shara”, “Khurmani”, “Chulloo” etc.
C. Wild apricot is an important tree – borne oilseed of the mid hills and dry temperate region of the country.
D. For most of them, wild apricot fruit has been serving as an important source of edible oil.
E. It contains vitamin A, carbohydrates, protein, phosphorous and niacin in higher quantity than majority of other common wild and cultivated fruits.
F. For some families, the major portion of the crop is utilised for the preparation of the distilled alcoholic liquor.
G. The hill farming communities of these regions have been maintaining wild apricot trees on their farmland bunds and adjoining crop land – support land as part of farm forestry/agro forestry practices.

91. Which of the following sentences will come FIRST after rearrangement?
(a) A  (b) B  (c) C
(d) D  (e) E

92. Which of the following sentences will come SECOND after rearrangement?
(a) A  (b) B  (c) C
(d) D  (e) F

93. Which of the following sentences will come THIRD after rearrangement?
(a) A  (b) B  (c) G
94. Which of the following sentences will come FOURTH after rearrangement?
(a) A (b) B (c) F (d) G (e) E

95. Which of the following sentences will come LAST after rearrangement?
(a) G (b) B (c) F (d) D (e) E

Directions (96–100) : In the following passage, there are blanks, each of which has been numbered. Against each, five words are suggested, one of which fits the blank appropriately. Find out the appropriate word in each case:

There are a number of...(96).....reasons not to travel by a public transport. There is the....(97).....of the time-table. Then, there are....(98).....about getting a seat, waiting at bus-stops and so on. Yet, there are deeper reasons why many of us....(99).....away from public transport. Each of us has our own set of....(100).....and opinions against public transport.

(a) varying (b) forbidden (c) vague (d) valid (e) illogical
(a) curiosity (b) ferocity (c) atrocity (d) rigidity (e) plan
(a) delights (b) concerns (c) concern (d) obstructions (e) dispute
(a) shy (b) get (c) struggle (d) gets (e) flee
(a) understanding (b) frustrations (c) prejudices (d) principles (e) thoughts

: Answers :

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

: Explanations :

1. The given series—
12 × 0.5 + 0.5 = 6.5
6.5 × 1 + 1 = 7.5
7.5 × 1.5 + 1.5 = 12.75

.............
= 71.25 × 3 + 3 = 216.75

2. Each number multiply by \( \frac{3}{2} \)

3. 12 × 1 = 12; 12 × 1.5 = 18
18 × 2.5 = 45; 45 × 4 = 180
180 × 6.5 = 1170

∴ \( ? = 1170 × 10.5 = 12285 \)

4. 22 + 1^2 = 22 + 1 = 23:
23 + 2^2 = 23 + 4 = 27
27 + 3^2 = 27 + 9 = 36:
36 + 4^2 = 36 + 16 = 52
52 + 5^2 = 52 + 25 = 77

∴ \( ? = 77 + 6^2 \)
= 77 + 36 = 113

5. 16 × 1 – 2 = 14:
14 × 2 – 4 = 24
24 × 3 – 6 = 66:
66 × 4 = 256
256 × 5 – 10 = 1270
66 × 4 – 8 = 256

∴ \( ? = 1270 × 6 – 12 = 7620 – 12 = 7608 \)

(6–10) :  
<table>
<thead>
<tr>
<th>कुल (10500)</th>
<th>महिला</th>
<th>पुरुष</th>
</tr>
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<tr>
<td>डॉक्टर</td>
<td>2205</td>
<td>441</td>
</tr>
<tr>
<td>इंजीनियर</td>
<td>1890</td>
<td>1134</td>
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<tr>
<td>वाणिज्यकर्मी</td>
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</tr>
<tr>
<td>डीजेम</td>
<td>1680</td>
<td>588</td>
</tr>
</tbody>
</table>

4683 5817

6. अभीष्ट अनुपात = \( \frac{756 + 1092}{1134 + 588} \)
= \( \frac{1848}{1722} \)
= \( \frac{308}{287} \)
= \( \frac{44}{41} \)

= \( \frac{1848}{1722} = \frac{308}{287} = \frac{44}{41} \)

= 1848 : 1722
= 308 : 287
= 44 : 41

7. अविध प्रतिष्ठान = \( \frac{1995}{2205} \) \times 100% = 90.47% = 90%

Trick : \( \frac{19}{21} \) \times 100% = 90.47% = 90%

8. अविध अंतर = 5817 – 4683 = 1134

9. अविध प्रतिष्ठान = \( \frac{441}{1260} \times 100% = 35% \)

10. अविध अनुपात = 693 : 315 = 77 : 35 = 11 : 5

11. \( x^2 + 5x + 6 = (x + 2)(x + 3) = 0 \)
∴ \( x = -2, -3 \)

12. \( 16x^2 = 1 \) \rightarrow \( 3y^2 + 7y + 2 = 0 \)

∴ \( x = \pm \frac{1}{4} \)

13. \( \sqrt{\sqrt{10648}} = 22 \) \rightarrow \( y = \pm \frac{12}{\sqrt{22}} \) \rightarrow \( \pm 22 \)

∴ \( x \geq y \)

14. \( \frac{12}{\sqrt{x}} = 4\sqrt{x} \) \rightarrow \( 22 = 4x \)
\( x = 5.5 \)
20. \( \frac{6\sqrt{y}}{16} = \frac{4\sqrt{y}}{16} = \frac{1}{2\sqrt{y}} \)

\( \frac{2\sqrt{y}}{16} = \frac{1}{2\sqrt{y}} \)

\( 4y = 16 \)
\( y = 4 \)

\( \therefore x > y \)

15. \( x^2 + 12x + 35 = 0 \)
\( (x + 5)(x + 7) = 0 \)
\( x = -5, -7 \)

\( \therefore y + 7 \) \( y + 4 = 0 \)
\( y = -7, -4 \)

\( \therefore x > y \)

16. लड़के लड़कियों

<table>
<thead>
<tr>
<th>50</th>
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<tbody>
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<td>4</td>
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</tbody>
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\( \frac{3}{2} \)

\( \frac{10}{8} \cdot \frac{5}{6} \)

60 : 40 = 3 : 2

अतः लड़कियों की संख्या

\( \frac{5}{2} \times 40 = 10 \)

17. 10 वर्ष पहले वर्तमान आयु 10 वर्ष बाद

\( x \) (माना)

\( \frac{x \times 125}{100} \times \frac{x \times 125 + 10}{100} + 10 \)

प्रश्न से,

\( x \times 125 = \left( \frac{x + 125}{100} + 10 \right) \times 83.3\% \)

\( \therefore x = 40 \) वर्ष

अतः वर्तमान आयु = 40 × 125% = 50 वर्ष

18. A : B

3 : 2

gati ka anupat

1 = 300 मी/ि

3 = 900 मी/ि

19. निचाहित नहीं किया जा सकता

20. धारा के साथ धारा के विपरीत

समय का अनुपात = 1 : 3

अतः चाल का अनुपात = 3 : 1

अतः नव का चाल का अनुपात = \( \frac{3+1}{2} = 2 \)

धारा की चाल में अनुपात = \( \frac{3-1}{2} = 1 \)

प्रश्न से,

\( 2 = \frac{28}{\text{km/h}} \)

\( \therefore 1 = \frac{14}{3} = \frac{4}{3} \) किमी/ि/ि

21. अभिज्ञ निवेश की गारंटी = 6250 × \( \frac{25}{31.25} \) रु. 5000

अतः आय = 5000 × 6% = रु. 300

22. 456.675 + 35.7683 × 67.909 = 58.876

= 457 + 35.8 × 67.9 = 59

= 457 + 2431 = 2829

23. (52.36)² = (52.4)² = 143877 = 143550

24. \( \sqrt{100000} = 316 \)

25. 564% × 212 + 394 = 1196 + 394 = 3

31. अभिज्ञ उत्तर = 64, 80, 96 का लघुत्तम = 960 सेमी = 9.6 मीटर

32. माना कुल विद्यार्थी = \( x \)

पटना जाने वाले = \( \frac{x}{3} \)

गया जाने वाले = \( \frac{x}{2} \)

उदासीन = \( \frac{x-x}{3}-\frac{x}{2} = \frac{x}{6} \)

प्रश्न से,

\( \frac{x}{2} - \frac{x}{6} = 10 \)

\( \therefore 3x-x = 10 \)

\( \therefore x = 30 \)

अतः पटना जाने वाले विद्यार्थियों की संख्या = 30 \( \times \frac{1}{3} = 10 \)

33. विनोबा : लगत मशूर = 4 : (4 – 1) = 4 : 3

34. माना \( x \) किलोग्राम सेब है।

प्रश्न से,

\( x \times 15 + 8 \times 15 = (x + 8) \times \frac{1150}{115} \times 100 \)

\( \Rightarrow 15x + 120 = 10x + 80 \)

\( \Rightarrow 5x = 40 \)

\( \Rightarrow x = 8 \) kg

35. बच्चे की आयु = 6 × 17 – 5 × 20 = 2 वर्ष

(36–37)

P Q U R T S

63 50

W

T \( \rightarrow \) P \( \rightarrow \) S

Q

(40–45)

(Canara) (Dena) (BOM) (OBC)

(C) A B D

(C) A B D

(46–50)

$ \rightarrow \) > \( \rightarrow \) < \( \rightarrow \) #

% \( \rightarrow \) < \( \rightarrow \) @

R > J > D = K < T
I. \( T > D \)  
II. \( T = D \)  
III. \( R > K \)  
IV. \( J > T \)

47. \( T < R > M = D < H \)  
I. \( D < R \)  
II. \( H > R \)  
III. \( T < M \)  
IV. \( T < D \)

48. \( M = B > N > R < K \)  
I. \( K > B \)  
II. \( R < B \)  
III. \( M > R \)  
IV. \( N < M \)

49. \( F > H = M < E > J \)  
I. \( J < M \)  
II. \( E > H \)  
III. \( M < F \)  
IV. \( F > E \)

50. \( D < A = B < K < M \)  
I. \( B > D \)  
II. \( K > A \)  
III. \( M > B \)  
IV. \( A < M \)

(51–55)  
Problems/health \( \rightarrow \) hlt/mlp with \( \rightarrow \) snk  
jacing \( \rightarrow \) ngi rise \( \rightarrow \) rtu on \( \rightarrow \) sa  
challenge \( \rightarrow \) riy every \( \rightarrow \) Ine each/day \( \rightarrow \) nop/hus

(56–60)

61. \( N^+ \)  
\[ \text{or} \]  
\( R^- S^- T \)  
\( R^- S^- T \)

62. \( V^- \)  
\[ \]  
\( W^- M^+ \)  
\( Y^- S \)

63. \( \text{N}^+ \)  
\[ \text{O}^- \]  
\[ \text{T}^- L \]

64. \( \begin{array}{cccccccc}
A & N & C & Q & E & T & G & W \\
\hline
+2 & +2 & +2 & +2 & +2 & +2 & +2 & +2 \\
\end{array} \)

(65–70)

<p>| | | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>9</td>
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</tr>
<tr>
<td>8</td>
<td>H</td>
<td>Black</td>
</tr>
<tr>
<td>7</td>
<td>F</td>
<td>Green</td>
</tr>
<tr>
<td>6</td>
<td>A</td>
<td>Yellow</td>
</tr>
<tr>
<td>5</td>
<td>G</td>
<td>Red</td>
</tr>
<tr>
<td>4</td>
<td>D</td>
<td>Orange</td>
</tr>
<tr>
<td>3</td>
<td>J</td>
<td>Pink</td>
</tr>
<tr>
<td>2</td>
<td>E</td>
<td>White</td>
</tr>
<tr>
<td>1</td>
<td>C</td>
<td>Grey</td>
</tr>
</tbody>
</table>

71. Replace 'his' with 'their'.
74. Change 'for expecting' into 'to expect'.
75. Change 'parent' into 'parents.' (because of 'both')
76. Refer the second sentence of the second paragraph.
78. Refer the second sentence of the first paragraph.
79. Refer the second last sentence of the first paragraph.
81. Refer the first sentence of the third paragraph.
82. Refer the last sentence of the third paragraph.
83. Refer the second sentence of the second paragraph.
84. Refer the first sentence of the last paragraph.
85. Refer the first sentence of the last paragraph.