1. In the following question, the symbols @, ©, $ and % is used with the following meanings as illustrated below:
A $ B means ‘A is not smaller than B’;
A @ B means ‘A is neither smaller than nor equal to B’
A © B means ‘A is neither smaller than nor greater than B’
A % B means ‘A is neither than nor equal to B’.

Now in the following question, assuming the given statement to be true, find which of the three conclusions, I, II and III given below then is/are definitely true and give your answer accordingly.

Statements: K © P, P @ Q, Q $ R

Conclusions: I. K @ R
II. R % P
III. Q % K

(A) Only I and II are true
(B) Only II and III are true
(C) Only III is true
(D) All I, II and III are true

Answer: D

Solution: A $ B BA, A © B A = B, A @ B A > B, A % B A < B
Hence, $ : ≥ © : = @ : > % : < Now,
Given K = P P > Q Q R or, K = P > Q R
Therefore, K > R; R < P; Q < K, or I, II, III are true.

[2012]

2. Choose the correct option so that a series can be established 17, 19, 23, 29, (.....), 37
(A) 31 (B) 33 (C) 35 (D) 36

Answer: A

Solution: 17 + 2, 19 + 4, 23 + 6, 29 + 2 = 31

[2013]

3. Two rows of numbers are given. The resultant of each row is to be worked out separately based on the following rules, and the question below the rows of numbers is to be answered. The operations of numbers in each row progress from left to right.

Rules:
(i) If an odd number is followed by another odd number, they are to be multiplied.
(ii) If an even number is followed by another even number, the first number is to be divided by the second even number.
(iii) If an even number is followed by the perfect square of an odd number, the first number is to be subtracted from the second number.
(iv) If an odd number is followed by an even number, the two are to be added.

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If an even number is followed by an odd number which is not a perfect square, the square of the odd number is to be added to the even number.

9 15 50
12 25 24

If the resultant of first row is x and that of second row is y, then find the value of \( x \div y \).

(A) 18  
(B) 8  
(C) 5  
(D) 6

**Answer:** C  
**Solution:** 9 15 50 12 25 24  
According to condition  
Row 1 \((9 \times 15) = (135 + 50) = 185\)  
Row 2 \((25 - 12) = (13 + 24) = 37\)  
Now, Row 1/Row 2 = 185/37 = 5

4. If the first and the second letters of the word MISJUDGEMENTS are interchanged with the last and the second last letters respectively, and similarly the third and the fourth letters are interchanged with the third and the fourth letters from the last respectively, and so on, then what will be the fifth letter to the right of the third letter from the left end?

(A) E  
(B) G  
(C) D  
(D) T

**Answer:** C  
**Solution:** After changing the letters of the given word it becomes,  
MISJUDGEMENTS → STNEMEGDUJSIM  
Now the fifth letter to the right of third letter from the left end is \((3+5=) 8\)th letter from the left end i.e., D.

5. Two positions of a dice are given below. When 1 is at the top, which number will be at the bottom?

(A) 2  
(B) 3  
(C) 4  
(D) 6

**Answer:** D  
**Solution:** In figure 1: Right side starts with 1; it is ascending order from right to left. Therefore the number at the bottom is 6.  
In figure 2: The back side of the die should be 1 and it is ascending order from back to front. Therefore the number at the bottom is 6.
6. Select a figure from amongst the options which will continue the same series as established by the five Problem Figures P, Q, R, S and T.

   +  ●  +  S  S  C  C  +  ?
   □  △  S  △  S  C  ●  +  □  △  □  
   P  Q  R  S  T

   (A)  (B)  (C)  (D)

   Answer: C

   [2012]

7. In the given question, two rows of numbers are given. The resultant number in each row is to be worked out separately based on the following rules and the question below the rows is to be answered. The operations of numbers progress from left to right.

Rules:
(i) If an even number is followed by another even number they are to be added.
(ii) If an even number is followed by a prime number they are to be multiplied.
(iii) If an odd number is followed by an even number, the even number is to be subtracted from the odd number.
(iv) If an odd number is followed by another odd number, the first number is to be added to the square of the second number.
(v) If an even number is followed by a composite odd number, the even number is to be divided by the odd number.

<table>
<thead>
<tr>
<th>65</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>3</td>
<td>11</td>
</tr>
</tbody>
</table>

What is the sum of the resultants of the rows?
(A) 366  (B) 66  (C) 264  (D) 462

   Answer: A

   [2013]

8. A cube of side 10 cm is colored red with a 2 cm wide green strip along all the sides on all the faces. Now, the cube is cut into 125 smaller cubes of equal size. How many cubes have three green faces each?

   (A) 0  (B) 4  (C) 6  (D) 8

   Answer: D

   Solution: The volume of the cube = 10 x 10 x 10 = 1000 cm³.
   Now, 1000/125 = 8 cm³
   This shows that the volume of each cube will be of 8 cm³ that is the side will be of 2 cm.
   Each small cube will be obtained from 8 corners as those will only have three green faces.

   [2014]

9. The letter in the word ULTRAVIOLET are arranged in the alphabetical order and each letter is assigned numerical value equal to its serial number as in the English alphabet, what is the difference between the sum of odd-positioned numbers and that of even-positioned numbers?
10. Two rows of numbers are given. The resultant number in each row is to be worked out separately based on
the following rules and the question below the rows is to be answered. The operations on numbers progress
from left to right.

Rules:
(i) If an even number is followed by another even number they are to be added.
(ii) If an even number is followed by a prime number, they are to be multiplied.
(iii) If an odd number is followed by an even number, the even number is to be subtracted from the odd
    number.
(iv) If an odd number is followed by another odd number, the first number is to be added to the square of
    the second number.
(v) If an even number is followed by a composite odd number, the even number is to be divided by the odd
    number.

\[
\begin{array}{ccc}
65 & 11 & 12 \\
15 & 3 & 11 \\
\end{array}
\]

What is the sum of the resultants of the two rows?
(A) 366 (B) 66 (C) 264 (D) 462

Answer: D
Solution: 65 + 11^2 = 186 : Row 1 : Rule 4
12 × 11 = 132 : Row 1 : Rule 2
3 + 11^2 = 124 : Row 2 : Rule 4 : Total sum = 442

[2016]

11. Study the following information carefully and answer the question given below. P, Q, R, S, T, V and W are
seven passengers and I, II, III are three different vehicles. There are at least two passengers in each
vehicle I, II and III and one of them is a lady. There are two engineers, two doctors and three teachers
among them. R is lady doctor and she does not travel with the pair of sisters P and V. Q, a male engineer
travels with only W, a teacher in vehicle I. S is a male doctor. Two persons belong to same profession do
not travel in the same vehicle. P is not an engineer and
travels in vehicle II.

How many lady members are there amongst them?
(A) Three (B) Four (C) Three or Four (D) Data inadequate

Answer: B
Solution: Q and W travelled in I. P and S travelled in vehicle II. R, P, V and one more lady are there to
be travelling in me.
12. Select the correct mirror image of the given Fig. (X), if the mirror is placed along MN.

![Figure X]

Answer: B

13. Pointing to a woman in a photograph, a man says "She is the grandmother of the son of my daughter-in-law's mother-in-law." How is the woman related to the man?

(A) Mother (B) Mother-in-law (C) Sister (D) Wife

Answer: D

14. Arun is fifth from the left end and Navin is twelfth from the right end in a row of children. If Navin shifts by three places towards Arun, he becomes tenth from the left end. How many children are there in the row?

(A) 21 (B) 22 (C) 23 (D) 24

Answer: D

Solution: Required no. of children in the row = (12 + 3 + 10) - 1 = 25 - 1 = 24.

15. Select a figure from the option figures which will continue the same series as established by the five Problem Figures.

![Problem Figures]

Answer: B

Solution: Since the series completes with OSTPL again it has to start with +.

16. Inspector Jatin travelled from his police station for 400 meters. He then turned left and travelled 500 meters straight after which he turned left again and travelled for 400 meters straight. He then turned right and walked for another 600 meters straight. How far is he from the Police station?

(A) 1.0 km (B) 1.1 km (C) 1.4 km (D) 1.8 km

Answer: B
Solution:

\[ \text{BC} = \text{Initial Displacement (400m)} \]
\[ \text{CD} = \text{Displacement after Left Turn (500m)} \]
\[ \text{DA} = \text{Displacement after another Left Turn (400m)} \]
\[ \text{AE} = \text{Displacement after Right Turn (600m)} \]
Therefore,
\[ \text{BE} = \text{Final Displacement from Police Station} \]
\[ = 600 + 500 \text{ m} \]
\[ = 1100 \text{ m} = 1.1 \text{ km} \]

17. Rita stands third in a row of twenty students, arranged in ascending order of height. Five new students join the group, all taller than Rita what will be Rita’s position if the students are now arranged in descending order of their heights?

(A) 22\text{nd}  \hspace{1cm} (B) 23\text{rd}  \hspace{1cm} (C) 18\text{th}  \hspace{1cm} (D) Data inadequate

Answer: D

18. P, Q and R are three points on the ground Point P is north of point Q and \(\triangle PQR\) is 135\(^o\) in anticlockwise direction. In what direction is point R from point Q?

(A) North-East  \hspace{1cm} (B) North-West  \hspace{1cm} (C) South-East  \hspace{1cm} (D) South-West

Answer: D
19. There is a definite relationship between figures (1) and (2). Establish a similar relationship between figures (3) and (4) by selecting a suitable figure from the options that would replace the (?) in fig. (4).

![Figures](image)

(A)  
(B)  
(C)  
(D)  

Answer: C

[2015]

20. Find the missing number, if a certain rule is followed row-wise or column-wise.

<table>
<thead>
<tr>
<th></th>
<th>7</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>7</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>19</td>
<td>31</td>
<td></td>
</tr>
</tbody>
</table>

(A) 2  (B) 3  (C) 4  (D) 6

Answer: C  
Solution: The first and last column adds up to 47. Hence the missing number to row 3 should be 5.  
[2016]

21. Read the following information carefully and answer the question given below it.

(i) There is a group of six persons A, B, C, D, E and F in a family. They are Psychologist, Manager, Lawyer, Jeweler, Doctor and Engineer.
(ii) The doctor is the grandfather of F who is a Psychologist.
(iii) The Manager D is married to A.
(iv) C, the Jeweler, is married to the Lawyer.
(v) B is the mother of F and E.
(vi) There are two married couples in the family. How is A related to E?

(A) Brother  (B) Uncle  (C) Father  (D) Grandfather

Answer: D  
Solution:

<table>
<thead>
<tr>
<th></th>
<th>Doctor</th>
<th>D : Manager</th>
<th>Generation 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>C : Jeweler</td>
<td>B : Lawyer</td>
<td>Generation 2</td>
<td></td>
</tr>
<tr>
<td>E : Engineer</td>
<td>F : Psychologist</td>
<td>Generation 3</td>
<td></td>
</tr>
</tbody>
</table>
Since, E & F are siblings; hence they are at the bottom of the generation tree. Also, as per the given information, Doctor is the grandfather, implies, he is at the top of the family tree. Since, the C, the jeweler is married to the Lawyer; hence the only possible place available is the Generation 2. Also, it satisfies the condition of two married couples in the family.

22. If 'Book' is called 'Pen', 'Pen' is called 'Paper', 'Paper' is called 'Eraser', 'Eraser' is called 'Scale' and 'Scale' is called 'Calculator', then with which does a student write?

(A) Book    (B) Paper    (C) Pen    (D) Calculator

Answer: D

23. If all the consonants starting from B are given sequentially the value of even numbers such as B = 2, C = 4 and so on, and all the vowels are given double the value of the preceding vowel and the value of A is 5, then what is the value of REASONING?

(A) 162    (B) 177    (C) 185    (D) 187

Answer: D

Solution:

| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S |
| 5 | 2 | 4 | 6 | 10| 8 | 10| 12| 20| 14| 16| 18| 20| 22| 40| 24| 26| 28| 30|

Now, REASONING = 28 + 10 + 5 + 30 + 40 + 22 + 20 + 22 + 10 = 187

24. Select a figure from the options which will continue the series as established by the Problem Figures.

(A)    (B)    (C)    (D)

Answer: C

25. If it is possible to make a meaningful word with the second, fourth, eight and tenth letters of the word CONFIDENCE, which of the following will be second letter of that word? If more than one such word can be made, give 'S' as the answer. If no such word can be made, give 'P' as the answer.

(A) O    (B) N    (C) S    (D) P

Answer: D

Solution: Words are gone and found which has no meaning.
26. Vijay is fifteenth from the front in a column of boys. There were thrice as many behind him as there were in front. How many boys are there between Vijay and the seventh boy from the end of the column?

(A) 33  (B) 34  (C) 35  (D) Data inadequate

**Answer:** C

**Solution:** Vijay being 15th in position, there are 14 in front of him and 42 (3×14) behind him. Hence there are 14 + 1 + 42 = 57 boys altogether standing. Now, 7th from the end of the line is the 51st boy. Vijay is the 15th boy from the beginning. Therefore there are 50 - 15 = 35 boys in between them or 51 - 16 = 35 boys.

27. Select a number which will replace the question mark in the number pattern given below.

```
4   2   3   5   2   11
14  21  ?
```

(A) 16  (B) 15  (C) 28  (D) 21

**Answer:** C

28. A set of three figures X, Y and Z shows a sequence of folding of a piece of paper. Figure (Z) shows the manner in which the folded paper has been cut. Select the figure from the options which would resemble the unfolded form of paper.

**Answer:** C

**Solution:** Two squares at the bottom of the unfolded figures are same for all. Observing carefully the last image of folded one, we find that at the left top corner we have a cut of triangle shape and so after unfolding it will give a square shape as shown in option (C).

29. A, B, C, D, E, F, G, H and K are sitting around a circle facing the Centre. F is fourth to the right of A, who is third to the right of (B) K is fourth to the left of B and third to the right of (D) C is third to the right of H. E is second to the left of G. What is E's position with respect to B?

(A) Second to the left (B) Third to the right (C) Fourth to the right (D) Third to the left

**Answer:** D
30. What is the minimum number of different coolers required to paint the given figure such that no two adjacent regions have the same color?

(A) 3  (B) 4  (C) 5  (D) 6

**Answer:** A  
**Solution:** We can you 3 different colors as the outer region is divided into 8 different regions, so no two colors will have same color.

31. Which of the options will come next in the series?  
JAZ, LEX, NIV, POT, _? __

(A) QUR  (B) RUS  (C) RUR  (D) RSR

**Answer:** D  
**Solution:** Let us consider the following series for a better understanding of the solution, as follows, 
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 
In the given series, JAZ, LEX, NIV, POT,  
Observe the progression in the 1st letter of each code,  
J (K) L (M) N (O) P (Q) R (being the first letter of our expected code)  
Similarly, observe the progression in the second letter of each code,  
A (B C D) E (F G H) I (J K L) O (P Q R) S (being the second letter of our expected code)  
Looking at the available options, we observe that option (D) has the first 2 letters as obtained above (i.e. RS).  
Therefore, RSR is the expected code.

32. Select a figure from the options which satisfies the condition of placement of dots as in Fig. (X).

**Answer:** D
33. Select the figure in which figure (X) is exactly embedded as one of its part.

![Figure (X)](image)

(A) ![Figure (A)](image)  
(B) ![Figure (B)](image)  
(C) ![Figure (C)](image)  
(D) ![Figure (D)](image)

**Answer:** A  
**Solution:** The figure X can be embedded exactly on (A) from the top as it is.  
[2014]

34. Which of the following Venn diagrams best represents the relationship amongst ‘State, Country, and Village’?

(A) ![Venn Diagram (A)](image)  
(B) ![Venn Diagram (B)](image)  
(C) ![Venn Diagram (C)](image)  
(D) ![Venn Diagram (D)](image)

**Answer:** A  
**Solution:** Village is the part of State and state is the part of country.  
[2015]

35. Eight friends Q, R, S, T, V, W, Y and Z are sitting around a circular table, facing the Centre. There are three males and five females in the group of friends. No two males are immediate neighbors of each other.

(i) V sits second to the right of his wife.  
(ii) S sits third to the right of V.  
(iii) W sits second to the right of her husband Z. Z is not an immediate neighbor of V's wife.  
(iv) T is a male and Y is not an immediate neighbor of V.  
(v) R sits second to the right of Q.  

Which of the following statements is true regarding T?

(A) T is an immediate neighbor of Z’s wife.  
(B) No male is an immediate neighbor of T.  
(C) Q sits second to right of T.  
(D) All are true.

**Answer:** D  
[2016]

36. RUST = 9-6-8-7 and BOARD = 25-12-26-9-23, how will you code ‘BEAT’?

(A) 25-23-24-7  
(B) 25-21-26-7  
(C) 25-22-25-7  
(D) 25-22-26-7

**Answer:** D
37. Select a figure from the options which will complete the pattern in Fig. (X).

![Fig. (X)](image)

(A) 
(B) 
(C) 
(D) 

**Answer:** D

38. Two positions of a dice are shown below. What number will be opposite to the number 4?

![Dice](image)

(A) 5  
(B) 6  
(C) 3  
(D) 1

**Answer:** A

**Solution:** The numbers 1, 2, 3, 6 are adjacent to 4. So, 5 will be opposite to the number 4.

39. Find the missing number, if same rule is followed row-wise or column-wise.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>18</td>
<td>24</td>
<td>32</td>
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<tr>
<td>12</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>?</td>
<td>4</td>
</tr>
<tr>
<td>72</td>
<td>112</td>
<td>128</td>
</tr>
</tbody>
</table>

(A) 2  
(B) 3  
(C) 6  
(D) 5
40. Select a figure from the options which satisfies the same conditions of placement of the dots as in Fig. (X).

\[\text{Answer: D} \]

\[\text{Solution: The diagram in (D) satisfies since the same set of similar figure is embedded.}\]

41. If the code of SENSITIVE is QHLVGWGYC then what will be the code of MICROSOFT?

\[\text{(A) KGAPMQMDT} \quad \text{(B) QKETQUQHV} \quad \text{(C) KLAUMVMIR} \quad \text{(D) LKBTNUNHS}\]

\[\text{Answer: C} \]

\[\text{Solution:}\]

\[
\begin{array}{ccc}
\text{S} & -2 & \text{Q} \\
\text{E} & +3 & \text{H} \\
\text{N} & -2 & \text{L} \\
\text{S} & +3 & \text{V} \\
\text{I} & -2 & \text{G} \\
\text{T} & +3 & \text{W} \\
\text{I} & -2 & \text{G} \\
\text{V} & +3 & \text{Y} \\
\text{E} & -2 & \text{C} \\
\end{array}
\quad
\begin{array}{ccc}
\text{M} & -2 & \text{K} \\
\text{I} & +3 & \text{L} \\
\text{C} & -2 & \text{A} \\
\text{R} & +3 & \text{U} \\
\text{O} & -2 & \text{M} \\
\text{S} & +3 & \text{V} \\
\text{O} & -2 & \text{M} \\
\text{F} & +3 & \text{I} \\
\text{T} & -2 & \text{R} \\
\end{array}
\]

42. How many triangles are there in the given figure?

\[\text{(A) 8} \quad \text{(B) 10} \quad \text{(C) 12} \quad \text{(D) 14}\]

\[\text{Answer: B}\]
43. Select a figure from the options which will replace the question mark to complete the given series.

Answer: B
Solution: One dot and 2 crosses are increasing.

44. Select a figure from the options which when placed in the blank space of Fig. (X) Would complete the pattern.

Answer: B

45. Code the group of digits as per the scheme and conditions given below.

Digit: 5 7 0 9 3 1 6 4 8 2
Letter/symbol: K E H $ Δ A J Q R @

Conditions:
(i) If the first as well as the last digit is odd their codes are to be interchanged.
(ii) If the first digit is even and the last digit is odd both are to be coded by the code for odd digit.
(iii) If the last digit is '0' it is to be coded by 'X'.
(iv) If the first as well as the last digit is even both are to be coded by '–'. 586403

(A) KRJQHΔ  (B) ΔRJQHK  (C) ΔHJQRK  (D) KHJQRΔ

Answer: B
Solution: 5 8 6 4 0 3 →3 8 6 4 0 5→ΔRJQHK
46. If 12% people in a village are suffering from cancer and 13% from blood pressure, which of the following diagram best represents the sick population of the village?

![Diagram Options]

**Answer:** D

**Solution:** Clearly, 12% + 15% = 25% i.e. $\frac{1}{4}$ (or a quarter) of the total area of the circle.

2012

47. Pair of first two figures on left side of ': : ' have a certain relationship between them. Establish the same relationship between the pair of figures on right side of ': : ', which will replace the "?" mark.

![Figure Options]

**Answer:** B

2013

48. A set of figures carrying certain characters, is given. Assuming that the characters in each set follow a similar pattern, and then find the missing character

![Number Options]

**Answer:** D

**Solution:** Sum of cubes of outside numbers is equal to middle number for each figure.

2014

49. Select the correct water image of given combination of letters and numbers.

S5L3T8

![Water Image Options]

**Answer:** C

2015
50. Find the water image of Fig. (X).

![Fig. (X)](image)

(A) ![Diagram A](image)  (B) ![Diagram B](image)  (C) ![Diagram C](image)  (D) ![Diagram D](image)

**Answer:** A  
**Solution:** The reflected image will be (A) upside down.

51. Look at the symbol-letter-number sequence given below.

2 P J @ 8 $ L B 1 V # Q 6 g W 9 K c D 3 © • £ 5 F R 7 A Y 4

Three of the following four are similar in relation to their positions in the above sequence and hence form a group. Which one does not belong to that group?

(A) Q K 5  
(B) L 6 D  
(C) P L £  
(D) 1 G ©

**Answer:** C  
**Solution:**

<table>
<thead>
<tr>
<th></th>
<th>Q 6 K 7 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>6 6 7 D</td>
</tr>
<tr>
<td>1</td>
<td>6 G 7 ©</td>
</tr>
</tbody>
</table>

Hence, PL£ doesn’t fit into the required pattern.

52. P is the mother of Q and daughter of R. S is the daughter of Q and sister of T. How is P related to T?

(A) Paternal grandmother  
(B) Maternal grandmother  
(C) Data inadequate  
(D) None of these

**Answer:** C

53. Find the odd one out.

(A) 18:108  
(B) 42:132  
(C) 22:112  
(D) 26:156

**Answer:** D  
**Solution:** Sum of the digits for left number and right number are same in the case of options A, B and C.

54. In the given question, two rows of numbers are given. The resultant number in each row is to be worked out separately based on the following rules and the question below the rows of numbers is to be answered. The operations on numbers progress from left to right.

**Rules:**

(i) If an odd number is followed by another composite odd number, they are to be multiplied.

(ii) If an even number is followed by an odd number which is not a perfect square, they are to be added.
(iii) If an even number is followed by a number which is a perfect square, the even number is to be subtracted from the perfect square.

(iv) If an odd number is followed by a prime odd number, the first number is to be divided by the second number.

(v) If an odd number is followed by an even number, the even number is to be subtracted from the odd number.

\[
\begin{array}{ccc}
27 & 12 & 5 \\
28 & 64 & k
\end{array}
\]

If the resultant of the first row is \(k\), then what will be the resultant of the second row?

(A) 42  (B) 33  (C) 108  (D) 39

Answer: D

Solution: Here we have two rows: 27, 12, 5 & 28, 64, \(k\)
First we solve for 27, 12, 5. So, from the given condition (v) we get 27 - 2 = 15
Now we have 15, 5, so from the given condition (iv) we get =3
Given result of first row is equal to \(k\), then \(k\) = 3
From the second row 28, 64, so from the given condition (iii) we get 64 - 28 = 36
Then the result of second row is 36 + \(k\) = 36 + 3 = 39.

55. The positions of how many digits in the number will remain same after the digits within the number 2138574 are arranged in ascending order?

(A) Nil  (B) Four  (C) Three  (D) Two

Answer: C

Solution: 1234578: Here there are three numbers in same place without any change that is 3, 5 and 7.

56. A child went 90 m in the East to look for his father, and then he turned right and went 20 m. After this he turned right and after going 30 m, he reached to his uncle's house. His father was not there. From there he went 100 m to his North and met his father in the shop. How far did he meet his father from the starting point?

(A) 80 m  (B) 100 m  (C) 140 m  (D) 260 m

Answer: B

Solution:

As per the given condition, the following is the sequence of the child's movements, AC (90m) -- CD (20m) -- DE (30m) -- EF (100m) In Triangle ABF, AF\(^2\) = AB\(^2\) + BF\(^2\)
Therefore, \(AF = 100\)m.
57. Priya starts her trip from a fixed point. She moves towards east and walks 25 meters. She then turns to her left and walks 30 meters. Next she moves 25 meters to her right. She then turns to her right again and walks 55 meters. Finally she turns to her right and moves 75 meters. In which direction is she now from her starting point?

(A) South  (B) North  (C) South-West  (D) North-East

Answer: C  

58. Which of the following Venn diagrams best represents the relationship amongst, "Honesty, Intelligence, and Aptitude"?

(A)  
(B)  
(C)  
(D)

Answer: C

59. A man travelled 400 meters straight from his office. He then turned left and travelled 500 meters straight, after which he turned, left again and travelled for 400 meters straight. He then turned right and walked for another 600 meters straight. How far is he from his office?

(A) 1.0 km  (B) 1.1 km  (C) 1.4 km  (D) 1.8 km

Answer: B

60. Select a figure from the options which when placed in the blank space of Fig. (X) Would complete the pattern.

(A)  
(B)  
(C)  
(D)

Answer: B

Solution: There is a reflection of the box 2 of first row in box 1 of second row. Hence there would be a reflection of box 2 of second row in box 1 of first row.
61. Match the given net with the correct picture.

![Net Image]

**Answer:** B

[2012]

62. A sheet of paper as shown in Fig (X) has to be folded to form a box. Choose a box from amongst the options that is similar to the box formed.

![Fig (X) Image]

**Answer:** B

[2013]

63. There is a definite relationship between figures P and Q. Establish a similar relationship between figures R and S by selecting a suitable figure from the options that would replace (?) in figure R.

![Figures P, Q, R, S Image]

**Answer:** D

**Solution:** The first symbol of P is placed the last position in Q. The last symbol of P is placed at the first place in Q. The middle shapes are inversed.

[2014]
64. Which of the following is the tenth to the right of the nineteenth from the right end in the given arrangement?

F 4 © J 2 E % M P 5 W 9 @ I Q R 6 U H 3 Z 7 «
A T B 8 V # G $ Y D

(A) M  (B) T  (C) A  (D) 2

Answer: B
Solution: From the given arrangement nineteenth from the right end is Q and tenth to the right of the nineteenth is T.

65. Select a figure from the options that illustrates the relationship amongst "pigeons, birds, dogs".

(A)  (B)  
(C)  (D)  

Answer: A
Solution: Relationship means there should be an intersection among these. Pigeon and birds are of same category. Hence most suitable diagram would be (A).

66. Find out which of the options completes the figure matrix?

(A)  (B)  
(C)  (D)  

Answer: B
Solution: Observing the main body parts we see that there are 3 figures/categories of different body parts (chest and stomach). Also the shape of the head is also changing in each. If we look at the foot of each category we find that two figures in each have shoes.

67. If two is subtracted from each odd digit and three is added to each even digit in the number 3675249, how many digits will appear twice in the new number thus formed?

(A) 1  (B) 2  (C) 3  (D) 4

Answer: B
68. Count the number of straight lines and squares in the given figure.

(A) 21 straight lines, 7 square  
(B) 18 straight lines, 8 squares  
(C) 17 straight lines, 8 square  
(D) 19 straight lines, 8 squares

Answer: D
Solution: For the top squares the lines counted is 3. For triangle it is 3. Also 4 lines for each of the three squares (12 in total) and one vertical line so, in total there are 19 straight lines. Number of squares is 8.

69. Which of the following options satisfies the same condition of placement of dots as in fig? (X)?

Answer: A

70. Kalyani is mother-in-law of Veena who is sister-in-law of Ashok. Dheeraj is father of Sudeep, the only brother of Ashok. How is Kalyani related to Ashok?

(A) Mother-in-law  
(B) Aunt  
(C) Wife  
(D) None of these

Answer: D

71. A goldsmith has five gold rings, each having a different weight:
   Statement 1: Ring D is weighing twice as much as ring E.
   Statement 2: Ring E is weighing four times as much as ring F.
   Statement 3: Ring F is weighing half as much as ring G.
   Statement 4: Ring G is weighing half as much as ring H.
   Statement 5: Ring H is weighing less than ring D but more than ring F.

Which of the following represents the descending order of weights of the rings?

(A) D, E, G, H, F  
(B) E, G, H, D, F  
(C) D, E, F, G, H  
(D) Data inadequate

Answer: D
Solution: As per the given condition, D < F < E = H < G Thus the data is insufficient to arrange D, E, F, G, H in descending order.
72. Which letter/number in the given letter-number sequence is exactly in the middle of the 9th letter/number from the left end and 10th letter/number from the right end?

H25 X A3 BC z T 421 S 6 P 9 D o W u7 NM

(A) o   (B) T   (C) 2   (D) P

Answer: C

73. Select a figure from the options which satisfies the same conditions of placement of the dots as in Figure (X).

Answer: B

Solution: Observe the figure X and the option B carefully.

74. Three different positions of a dice are shown below. Which of the following colors will be opposite to the face having Red color?

(A) White   (B) Pink   (C) Brown   (D) Violet

Answer: D

Solution: From the given figures pink, blue and brown are adjacent to Red color, then Violet is opposite to Red colour.
75. A sheet of paper has been folded (either once or twice) and then the folded sheet has been cut. You have to select a figure from amongst the option figures that would most closely resemble the unfolded form of Fig. (X).

![Fig. (X)](image)

(A) ![Option A](image)  (B) ![Option B](image)  (C) ![Option C](image)  (D) ![Option D](image)

**Answer:** B  
**Solution:** The cut portion would have reflection of one part of X.  

[2016]

76. In the following question from amongst the options, select the one which satisfies the same conditions of placement of the dot as in Fig. (X).

![Fig. (X)](image)

(A) ![Option A](image)  (B) ![Option B](image)  (C) ![Option C](image)  (D) ![Option D](image)

**Answer:** C  
**Solution:** Observing carefully the common points among figures option C is correct.  

[2012]

77. If the letters in the word RHoMBuS are arranged as they appear in the English alphabets, the position of how many letters will remain unchanged?

- (A) 1  
- (B) 2  
- (C) 3  
- (D) 4

**Answer:** D  

[2013]

78. In the given question, which number will replace the question mark?

(A) 115  
(B) 130  
(C) 135  
(D) 140
Answer: B
Solution: $492 = (5 \times 6 \times 8) + (7 \times 4 \times 9) = 240 + 252$; $572 = (7 \times 5 \times 4) + (6 \times 8 \times 9) = 140 + 432$; Therefore, ‘?’ = $(4 \times 3 \times 5) + (7 \times 2 \times 5) = 60 + 70 = 130$.

79. Select from the options which forms the correct water image of the given word.

CARING
(A) CARING
(B) CARIING
(C) CARING
(D) CARNIG

Answer: C

80. Select a figure from amongst the options, which when placed in the blank space of fig. (X) Would complete the pattern.

Answer: D

81. Select a Venn diagram from the options which best represents the relationship amongst “Dog, Parrot, and Pet animals “?

(A)
(B)
(C)
(D)

Answer: C
82. Find the number of quadrilaterals in the given figure.

(A) 10    (B) 6    (C) 9    (D) None of these

**Answer:** A

**Solution:** Observe the figure carefully.

83. Read the following information and answer the questions that follow.

(i) Four persons A, B, C and D eat mango, banana, orange or peach from Monday to Thursday. No two persons eat the same fruit on same day. Each of them eats only one fruit on a day and does not repeat it on any other day.

(ii) Neither C nor D eats orange or peach on Tuesday.

(iii) B eats banana on Wednesday.

(iv) A eats peach on Monday.

(v) C does not eat mango on Thursday.

(vi) D eats banana on Monday. Who eats orange on Tuesday?

(A) A    (B) B    (C) C    (D) Either A or B

**Answer:** D

84. Rita drives to the north of her place of stay at A and after travelling 25 km, finds that she has driven in the wrong direction. She then turns to her right and travels 2 km, and then she again turns to the right and drives straight another 25 km. How much distance has she now to cover to go back to the starting point?

(A) 25 km    (B) 2 km    (C) 4 km    (D) 40 km

**Answer:** B

**Solution:**

The following is the sequence of movement of Rita, AB (25km) – BC (2km) – CD (25km)

Hence, final displacement from A = 2 km.
85. Select a figure from the options in which Fig. (X) is embedded as one of its part.

**Answer:** A