Date: 05/11/2017

Max. Marks: 50   **SOLUTIONS**   **Time allowed: 45 mins**

Direction Question (1-4) there is a number series following a pattern one place is left blank. Find answer among the options.

1.   87, 56, 30, ...

(1) 26   (2) 20   (3) 12   (4) 0

Ans. **(4)**

Sol. $8 \times 7 = 56$

$3 \times 0 = 0$

2.   4, 5, 12, 39, 160,...........

(1) 805   (2) 790   (3) 695   (4) 225

Ans. **(1)**

Sol.
4,   5,   12,   39,   160,   805,
$\times 1+1$ $\times 2+2$ $\times 3+3$ $\times 4+4$ $\times 5+5$

3.   2, 12, 36, 80, 150,

(1) 210   (2) 258   (3) 252   (4) 194

Ans. **(3)**

Sol.   2,   12,   36,   80,   150,   252,
1^3+1^2 2^3+2^2 3^3+3^2 4^3+4^2 5^3+5^2 6^3+6^2

4.   124,139,127,142,130,145..........

(1) 127   (2) 132   (3) 133   (4) 149

Ans. **(3)**

Sol. Alternate + 3

Direction Questions (5-6) Find the missing terplace of question mark.

5.

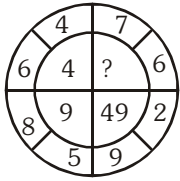| 38	22	69
34	23	27
28	14	?

(1) 46   (2) 29   (3) 23   (4) 99

Ans. **(1)**

Sol. $2 \times 8 \times 1 \times 4 = 64$

Reverse it = 46

6.

(1) 121   (2) 64   (3) 3   (4) 1

Ans. (4)

Sol. $(9 - 2)^2 = 49$, $(8 - 5)^2 = 49$

$(6 - 4)^2 = 4$ $(7 - 6)^2 = 1$

7. In a certain code language 'NAME' is written as 'OYPA' then how will 'TEAM' be coded in that language?

(1) UCDF   (2) UCDH   (3) UCDN   (4) UCDI

Ans. (4)

Sol.
N A M E   T E A M
+1 −2 +3 −4   +1 −2 +3 −4
O Y P A   U C D I

8. If MINERAL is written as QRSTUVW and SOUND is written as ABCSD, the how wifl READER be written in same code?

(1) QDZCDQ   (2) SBFEFS   (3) UTVDTU   (4) TUDVUT

Ans. (3)

Sol. By direct coding

9. On 26 January, 1947 is SUNDAY, then which day on 2 September, 1947 ?

(1) MONDAY   (2) TUESDAY   (3) WEDNESDAY   (4) SUNDAY

Ans. (2)

Sol. No. of odd day = (5 + 0 + 3 + 2 + 3 + 2 + 3 + 3 + 2) = 23

= 2

10. What will be the angle between the minute hand and hour hand of a clock at 7:35 ?

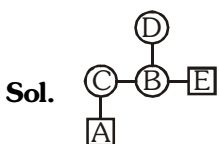(1) 22 ½°   (2) 17 ½°   (3) 12 ½°   (4) 0°

Ans. (2)

Sol. $\theta = \left| \dfrac{11}{2} \times 35 - 7 \times 30 \right|$

$= 17.5°$

11. A is son of C, C and B are sisters, D is the mother of B. E is the son of D, which one of the following is correct?

(1) E is the maternal uncle of A   (2) B is the grandfather of A

(3) C and E are sisters   (4) E and A are brothers

Ans. (1)

Sol.

E is matenal uncle of A

12. In a row of children Teena is 5th from the left & Meena is 6th from the right. If they interchange their places then Teena becomes 13th from the left. Now what place will be occupied by Meena from the right.

(1) 4   (2) 14   (3) 15   (4) 18

Ans. (2)

Sol. Meena from right = 6 + 13 – 5 = 14

Direction (13-14) Study the letter series and answer the following questions.

13. ......bca.........cca.........ca...........b.....c

(1) aaaaa   (2) aabaa   (3) bbabb   (4) bbbab

Ans. (NA)

Sol. Not available

14. ....cb........ca.........bacb.......ca......bac.....d

(1) bddddb   (2) addddb   (3) bbbddd   (4) addbbb

Ans. (2)

Sol. a̲ cb̲d ca̲dbacb̲d ca̲dbacb̲d

15. If a man facing east rotates in clockwise direction 45° & then, anti clockwise 270° then clockwise 180° which direction is he facing now.

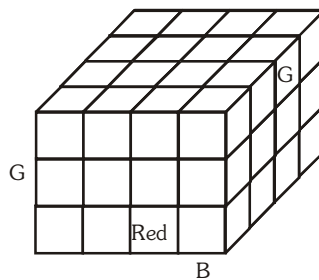(1) South-East   (2) West   (3) North-East   (4) South

Ans. (3)

Sol. = 45 – 270 + 180

= – 45

N – E

Direction (16-17) Question six faces of a cube are painted in such a way that no two adjacent faces are of same colour. The three colours used are Red, Blue & Green. The cube is then cut into 32 smaller and 4 big cubes in such a way that big cube has no red face, Answer the rollowins Questions.

16. How many cubes are coloured on three faces ?

(1) 0   (2) 8   (3) 16   (4) 32

Ans. (2)

17. How many cubes have exatly two faces painted ?

(1) 16   (2) 20   (3) 32   (4) 36

Ans. (2)

Direction (18-19) Questions match the numbers in Column 1 with the Rules in Column II.

Column I	Column II
17	$2x^3 + 3$
18	$2x^2 - 1$
57	$x^2 + 2x$
28	$x^3 - 3x$
15	$3x^2 + 1$

18. Which rule the number 28 follows?

(1) $2x^2 - 1$ (2) $3x^2 + 1$ (3) $x^3 - 3x$ (4) $x^2 + 2x$

Ans. (2)

Sol. $3x^2 + 1 \Rightarrow 3 \times (3)^2 + 1 = 28$

19. Which number follows the rule $2x^3 + 3$?

(1) 15   (2) 17   (3) 18   (4) 57

Ans. (4)

Sol. $2x^3 + 3 = 57$

$x \Rightarrow 3$

20. Which of the following words cannot be made from the word "COMMUNICATION".

(1) UNION   (2) ACTION   (3) MUSIC   (4) CAUTION

Ans. (3)

Sol. S is not present

21. Arrange the following words according to dictionary arrangement.

(a) WOUND   (b) WRITER   (c) WHITER   (e) WORST

(f) WORKED

(1) caebd   (2) adceb   (3) dcbae   (4) cedab

Ans. (4)

Sol. Whiter, Worked, Worst, Wound, Writer

22. Select the combination of numbers so that the letters arranged accordingly will form a meaningful word.

J C O P T E R
1 2 3 4 5 6 7

(1) 2645137   (2) 1345672   (3) 7645132   (4) 4731625

Ans. (4)

Sol. P R O J E C T

Six friends A, B, C, D, E, F are sitting in a closed circle facing the centre. Direction (23-24) Questions.

E is to the Left of D

C is between A and B

F is between A and E
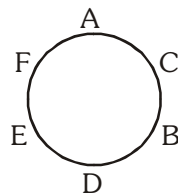
23. Who is the Left of B ?

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

Ans. (3)

24. Who is the Right of C ?

    (1) A   (2) B   (3) E   (4) F

Ans. (1)

25. A man is performing yoga with his head down and legs up. His face is towars the west. In which direction will his left hand be ?

    (1) North   (2) South   (3) East   (4) West

Ans. (1)

Sol. North

Direction (26-27) are based upon the sum of addition, Each letter has unique value and for unique value there is unique letter.

    Given E = 4

$$\begin{array}{r} L\ E\ T \\ +\ T\ H\ E \\ \hline L\ O\ S\ S \end{array}$$

$$\begin{array}{r} 1\ 4\ 8 \\ +\ 8\ 7\ 4 \\ \hline 1022 \end{array}$$

26. Find the value of O ?

    (1) 3   (2) 1   (3) 0   (4) 2

Ans. (3)

Sol. O = 0

27. Find the value of S ?

    (1) 8   (2) 6   (3) 4   (4) 2

Ans. (4)

Sol. S = 2

28. A printer numbers the pages of a book starting with 1 and uses 3193 digits in all. How many pages does the book have ?

    (1) 1074   (2) 1075   (3) 1076   (4) 1077

Ans. (2)

Sol. $\dfrac{3193 - (9 + 180 + 2700)}{4} = \dfrac{304}{4} = 76$

No of page = 999 + 76 = 1075

Direction (29-30) Questions. A carpenter has the five wooden articles A, B, C, D, E having different weight.

    1. A weights twice as B

    2. B weights four & half time as much as C

    3. C weights half as much as D

    4. D weights halfas much as E

    5. E weights less than A but more than C

$A = 2B$, $B = 4.5C$, $C = \dfrac{D}{2}$, $D = \dfrac{E}{2}$

$\therefore$ Order is A, B, E, D, C

29. Which of the following is lightest in weight

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

Ans. (2)

30. Which of the following article is heaviest in weight?

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

Ans. (3)

31. Find out one out

    (1) SEPTEMBER   (2) JULY   (3) MAY   (4) APRIL

Ans. (4)

Sol. Months position is even except option 4

32. Determine the Relationship,

CLOSE : DNRWJ : : OPEN :

    (1) RZWR   (2) RPJB   (3) PRHR   (4) PRJQ

Ans. (3)

Sol. C + 1 = D $\therefore$

    L + 2 = M   O + 1 = P

    O + 3 = R   P + 2 = R

    S + 4 = W   E + 3 = H

    E + 5 = J   N + 4 = R

33. TEACHER, COLLEGE, STUDENT, which figure represented it?

Ans. (3)

Sol.
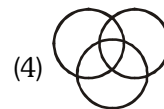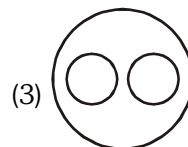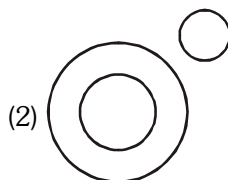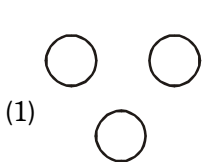
34. If 'green' is called 'red', 'red' is called 'blue', 'blue' is called 'white', 'white' is called 'yellow', 'yellow' is called 'violet' then what is the colour of grass.

(1) Green   (2) Red   (3) Yellow   (4) Violet

Ans. **(2)**

Sol. Colour of grass is green,

Green is called red

35. In a certain code language, "Sue Re NIK" means "She is brave". "Pi sor Re NIK" means "She is always smiling" and "Sor Re Zhi" means "is always cheerful." What is the code used for word "smiling"?

(1) Sor   (2) NIK   (3) Re   (4) Pi

Ans. **(4)**

Sol. Smiling = Pi

36. In the following sequence of Instructions, 1 stands for RUN, 2 stands for STOP, 3 stands for GO, 4 stands for SIT and 5 stands for WAIT, If the sequence were to continue, which instruction with come next?

$$4\ 4\ 5\ 4\ 5\ 3\ 4\ 5\ 3\ 1\ 4\ 5\ 3\ 1\ 2\ 4\ 5\ 4\ 5\ 3\ 4\ 5\ 3$$

(1) Wait   (2) Sit   (3) Run   (4) Stop

Ans. **(3)**

Sol. Run comes next

In the following figure, rectangle, square, circle and triangle represent the regions of wheat, gram, maize and rice cultivations, respectively. Give the answer.
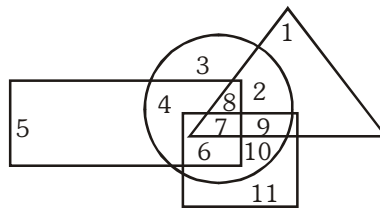
37. Which area is cultivated by rice and maize and nothing else ?

(1) 9   (2) 8   (3) 7   (4) 2

Ans. **(4)**

Sol. By observation

Observe the colours and answer the following
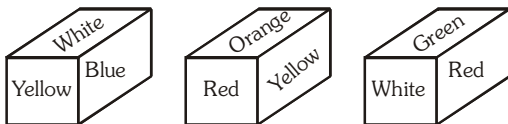
38. Which coloured surface is opposite to yellow colour.

(1) Green   (2) Orange   (3) Red   (4) White

Ans. **(1)**
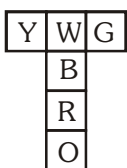
Sol.

39. How many cubes are there in the given figure ?
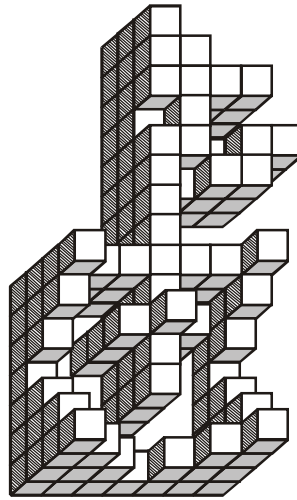
(1) 132   (2) 138   (3) 140   (4) 142

Ans. **(3)**

Sol. By counting

Directin question (40). Given four figures three figures are similar in a certain manner. Choose the different one. (Odd one out)
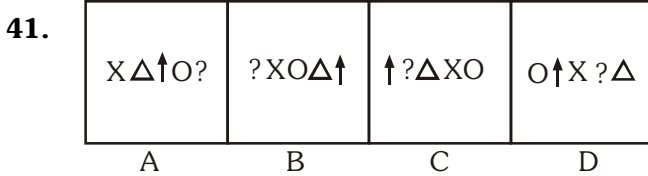
40. (1)   (2)   (3)   (4)
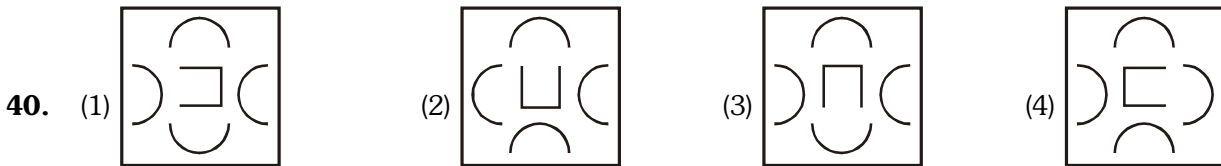
Ans. **(1)**

Sol. By observation

Direction Question (41). The Following question consists of four problem fig. ABCD and four answer figures Marked (I.) (2.) (3.) (4.) select the gif. from amongst the answer figures which will continue the serial.

41.

Problem Figure

X△↑O?	?XO△↑	↑?△XO	O↑X?△
A	B	C	D

(1) △?X↑O   (2) △O↑X?   (3) ↑X?△O   (4) △O?↑X

Ans. **(4)**

Sol. By observation

42. Fig. A and B are related in some way. According to same relationship among C and D. Choose the correct alternate.

Problem Figure

A   B   C   D

(1)   (2)   (3)   (4)
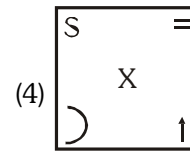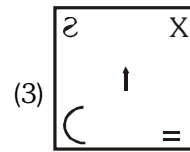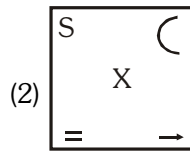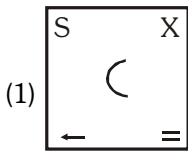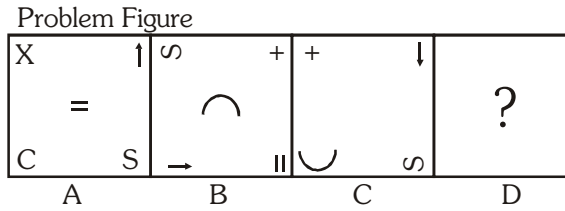
Ans. (1)

Sol. By observation

43. What is the minimum number of different colours required to paint the given fig. such that no. two adjacent regions have the same colour?
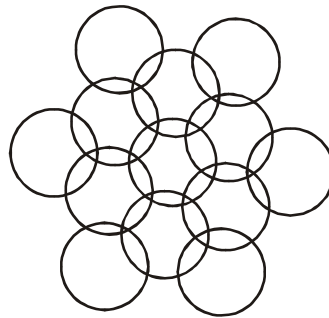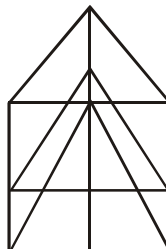

(1) 5   (2) 4   (3) 3   (4) 2

Ans. (2)

Sol. By observation

44. How many, triangles and parallelograms are there in the following figure?

(1) 21, 17   (2) 19, 13   (3) 21, 15   (4) 19, 17

Ans. (1)

Sol. By counting

45. Find the water image of figure 'X'.

(X)

(1)   (2)   (3)   (4)
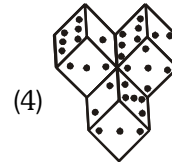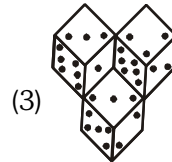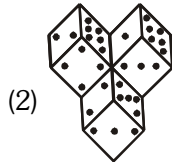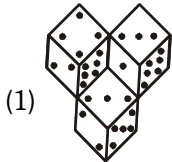
Ans. **(2)**

Sol. By observation

46. Find the the mirror image of the following.

NTSEscoLeR

(1) ЯɘＬoɔƆＥＳＴＮ   (2) ЯɘＬoɔƨＥＳＴＮ   (3) ЯɘＬoɔƨＥＳＮＴ   (4) ЯɘＬoɔƨＥＳＴＮ

Ans. **(4)**

Sol. By observation

47. Which three figures among five figures A, B, C, D & E will forms a complete square.

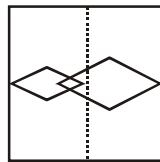A   B   C   D   E
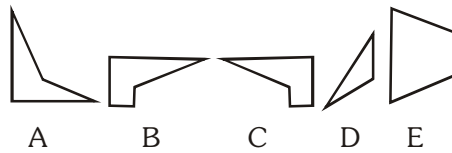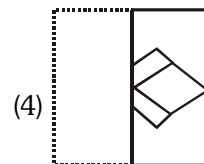
(1) ABC   (2) BCD   (3) CDE   (4) BCE
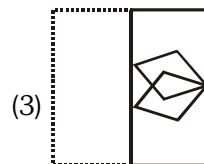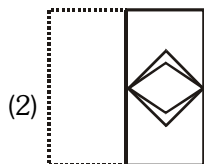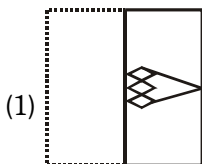
Ans. **(4)**

Sol. By observation

48. A square transparent sheet with a pattern is given. Fig. out from amongst the four alternatives as to how the pattern would appear when the transparent sheet is folded at the dotted line.
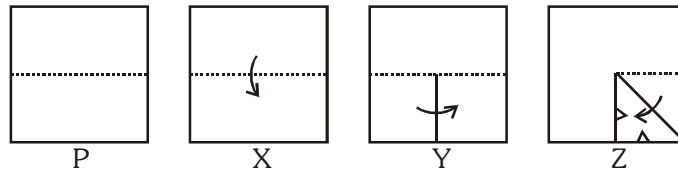
Transparent Sheet

Resonse Sheet

(1)   (2)   (3)   (4)
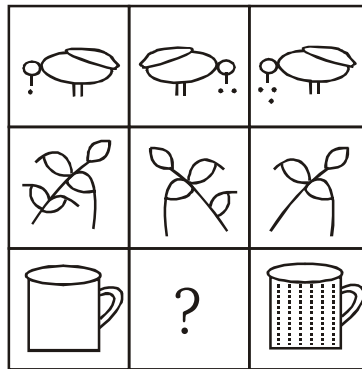
Ans. **(1)**

Sol. By observation

49. Direction Question (49). Paper has been folded as shown with the dotted lines in the given fig. PXYZ & paper has been cut. How would the paper look like when unfolded.

P   X   Y   Z

(1)   (2)   (3)   (4)

Ans. **(2)**

Sol. By observation

50. Select among four alternatives which complete the given Matrix.

(1)   (2)   (3)   (4)

Ans. **(2)**

Sol. By observation