Date: 08/11/2015

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

Direction : In each of the questions 1 to 4 some of the letters are missing in the given series with one term missing shown by question mark (?). This term is one of the alternatives among the four groups of letters given under it. Find the right alternative.

1. Z, W, S, ?

(1) P   (2) O   (3) N   (4) Q

Ans. *(3)*

Sol. Difference between the terms is –3, –4, –5...

2. AN, CP, FS, ?,

(1) IV   (2) JW   (3) KX   (4) LY

Ans. *(2)*

Sol. Ist letter of the terms difference is - +2, +3, +4....

   IInd letter of the terms difference is - +2, +3, +4....

3. MYZ, LWX, ?, JST.

(1) KUV   (2) IQR   (3) HOP   (4) GMN

Ans. *(1)*

Sol. Ist letter of the terms difference is –1, –1, –1......

   IInd letter of the terms difference is –2, –2, –2...

   IIIrd letter of the terms difference is –2, –2, –2.....

4. bdf, hjl, ? , tvx.

(1) nrp   (2) pnr   (3) nqr   (4) npr

Ans. *(4)*

Sol. There is difference of letters in each term is +6, +6, +6....

Direction : In each of the questions 5 to 8 some of the numbers are missing in the given series with one term missing shown by question mark (?). This term is one of the alternatives among the four numbers given under it. Find the right alternative.

5. 8, 27, 64, ?, 216, 343.

(1) 125   (2) 81   (3) 100   (4) 196

Ans. *(1)*

Sol. Pattern is $2^3, 3^3, 4^3, 5^3, 6^3, 7^3$.

6. 5, 11, 19, ?, 41.

(1) 28   (2) 29   (3) 30   (4) 35

Ans. *(2)*

Sol. Difference between the terms is +6, +8, +10, +12.

7. 120, ?, 24, 6, 0.

(1) 100   (2) 70   (3) 60   (4) 20

Ans. *(3)*

Sol. Pattern is $5^3–5, 4^3–4, 3^3–3, 2^3–2, 1^3–1$.

8. $729, 81, 9, 1, \frac{1}{9}, \_?\_, \frac{1}{729}$.

(1) $\frac{1}{27}$ (2) $\frac{1}{81}$ (3) $\frac{1}{243}$ (4) $\frac{1}{486}$

Ans. *(2)*

Sol. Pattern is $\div 9, \div 9, \div 9, \div 9, ...$

Direction : In each of the questions below are given two statements and two conclusions numbered I and II. You have to take the given two statements to be true even if they seem to be at variance from commonly known facts. Read the conclusions and then decide which of the given conclusions logically follows from the two given statements.

9. Statements (i) : All pencils are pens.

(ii) : All pens are markers.

Conclusions (I) : All pencils are markers.

(II) : Some pens are pencils.

(1) Only conclusion I is true (2) Only conclusion II is true

(3) Both conclusions I and II are true (4) Neither conclusion I nor conclusion II is true.

Ans. *(3)*

Sol.
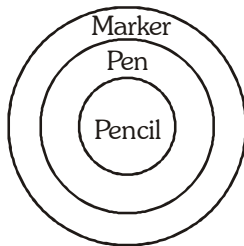
The above figures show the relationship among Pencil, Pen & Markers.

Conclusion I, All pencils are markers follow from the diagram.

Conclusion II, Some pens are pencils follow from the diagram.

Hence, both conclusions I and II are true.

10. Statements (i) : Some players are singers.

(ii) : All singers are tall.

Conclusions (I) : Some players are tall.

(II) : All players are tall.
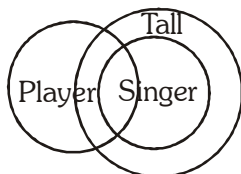
(1) Only conclusion I is true (2) Only conclusion II is true

(3) Both conclusions I and II are true (4) Neither conclusion I nor conclusion II is true.

Ans. *(1)*

Sol.

The above figures show the relationship among Player, Singer and Tall.

Conclusion I, Some players are tall follow from the diagram.

Conclusion II, All players are tall does not follow from the diagram.

Hence, only conclusion I is true.

11. Statements (i) : All stones are diamond.

Statements (ii) : Some diamonds are pearl.

Conclusions (I) : Some pearls are stone.

Conclusions (II) : All diamonds are pearl.

(1) Only conclusion I is ture

(2) Only conclusion II is true

(3) Both conclusion I and II are ture

(4) Neither conclusion I nor conclusion II is true

Ans. **(4)**

Sol.

Fig. (1)　　　　Fig. (2)
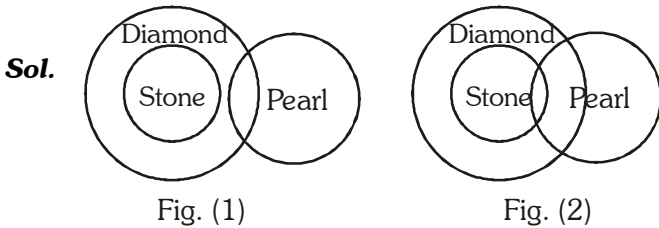
The above figures show the relationship among Stone, Diamond and Pearl.

Conclusion I, Some pearls are stone follow from Fig.(2) but not follow from Fig.(1).

Conclusion II, All diamond are pearl does not follow from both figures.

Hence, neither (1) nor (2) conclusions follows.

12. Which of the following Venn diagrams corrrectly represents intelligence, ability and honesty ?
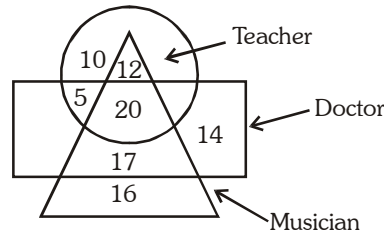
(1)   (2)   (3)   (4)

Ans. **(3)**

Sol.
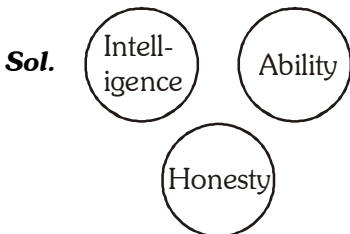
13. Which of the following Venn diagrams correctly represents Delhi, India and Asia ?

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

Ans. **(3)**

Sol.
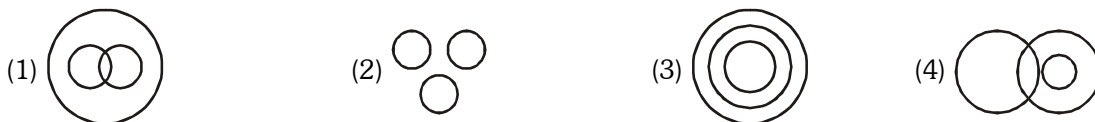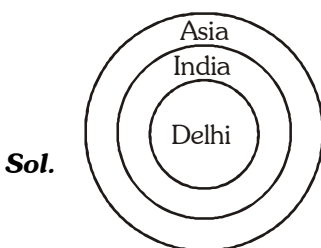
Directions (Q.14 & Q.15): Given answer on the following Venn diagram :

14. How many persons are related to all three ?

    (1) 20   (2) 12   (3) 32   (4) 17

Ans. *(1)*

Sol. From the given Venn diagram 20 persons are related to teacher, doctor & musician.

15. How many persons are related to any two ?

    (1) 32   (2) 34   (3) 43   (4) 27

Ans. *(2)*

Sol. From the given Venn diagram 34 persons are related to any two.

Direction : In questions 16 to 19 three alternatives are alike in a certain way but the rest one is different. Find out the odd one and write correct answer.

16. (1) ABNO   (2) CDPQ   (3) EFRS   (4) GHUT

Ans. *(4)*

Sol. Difference between terms in all option is +1, +12, +1 except GHUT.

17. (1) 144, 12   (2) 121, 11   (3) 80, 9   (4) 100, 10

Ans. *(3)*

Sol. All option except option 3 first number is square of the second number.

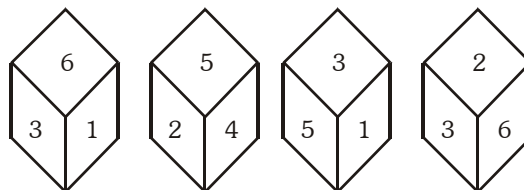**18.** (1) Pen   (2) Pencil   (3) Chalk   (4) Blackboard

Ans. *(4)*

Sol. All option except option 4 are used to write.

19. (1) Haryana   (2) Gujrat   (3) Rajasthan   (4) Shimla

Ans. *(4)*

Sol. All option except option 4 are states.
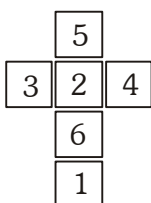
20. In the given dice the opposite side of the 3 face is having which number ?

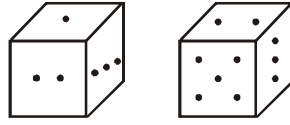   (1) 2   (2) 3   (3) 4   (4) 6

Ans. *(3)*

Sol. Expanded form from the given dice –

So, 4 is the opposite side of the face having 3.
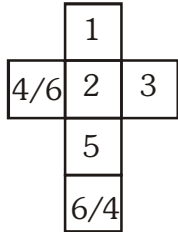
21. In the given two positions of a dice, when 2 is below the dice which number is on the dice ?

(1) 3   (2) 5   (3) 1   (4) 6

Ans. *(4)*

Sol. When we expand the given dice

	1	
4/6	2	3
	5	
	6/4	

From the given option answer is 6.

Direction : Answer the questions on the basis of cube:

22. A cube of side 6 cm is divided in the cubes of side 2 cm. Then the total number of cubes is

(1) 9   (2) 27   (3) 81   (4) 216

Ans. *(2)*

Sol. Total cubes $= \left(\dfrac{6}{2}\right)^3 = 3^3 = 27$.

23. In the given figure of cube which is opposite face of 3 ?

	1	
3	2	
	4	
	5	6
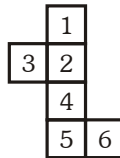
(1) 1   (2) 4   (3) 5   (4) 6

Ans. *(4)*

Sol. From the given figure-

1 is opposite to 4

2 is opposite to 5

3 is opposite to 6

24. If in a coded language the word ' REKHA' is written as 'AHKER' then in the same code language 'HEMA' will be written as

(1) AMEH   (2) EMAH   (3) MAHE   (4) EAMH

Ans. *(1)*

Sol. REKHA $\xrightarrow{\text{Re verse}}$ AHKER

HEMA $\xrightarrow{\text{Re verse}}$ AMEH

25. If in a coded language the word CHILDREN is written as EJKNFTGP then TEACHER will be written as

(1) VGCEJTG   (2) VGCEJGT   (3) VGCJEGT   (4) VGCGEJT

Ans. *(2)*

Sol. $\text{CHILDREN} \xrightarrow[\text{each letter}]{+2 \text{ in}} \text{EJKNFTGP}$

$\text{TEACHER} \xrightarrow[\text{each letter}]{+2 \text{ in}} \text{VGCEJGT}$

26. In a coded language the given alphabets are written in special codes. Then code 973578 will be

A	B	C	D	E	S	U	V	M	N
7	9	1	3	4	2	0	6	5	8

(1) BADMAN   (2) BACMAN   (3) DUEMAN   (4) MANSDE

Ans. *(1)*

Sol. As per the Above given codes the code for 9 7 3 5 7 8 is BADMAN

27. In a coded language 'RUSTY' is wirtten as 96872. Then in the same coded language 'ZXWV' will be written as

(1) 1354   (2) 1543   (3) 1345   (4) 1534

Ans. *(3)*

Sol. 'RUSTY' is written as 96872 which is the reverse position value of the given alphabets.

So reverse position value for 'ZXWV' is 1345.

28. A is uncle of B, B is daughter of C, C is the wife of D's son. Then how is A related to D ?

(1) Son   (2) Brother   (3) Father   (4) Maternal uncle

Ans. *(1)*

Sol.
D
↓
A(+) — Son × C(–)   × → Couple
↓   (+) → Male person
B(–)   (–) → Female person

29. Ram travels 8 km to south, then moves to right and travels 6 km and at the end he again moves right and travels 8 km. Then the distance of Ram from initial point is

(1) 6 km   (2) 8 km   (3) 10 km   (4) 14 km

Ans. *(1)*

Sol.

B ····6km···· A
8km↑   ↓8km
   ←——
  6km
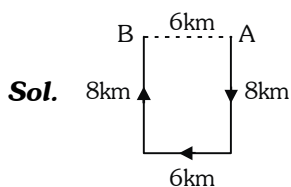
Distance of Ram from initial point A to final point B is AB = 6 km.

30. If the meaning of Δ is '+', θ is 'x', □ is '÷' and φ is '–', then the value of 24 □ 6 Δ 5 θ 6 φ 14 is

(1) 34   (2) 20   (3) 14   (4) 2

Ans. *(2)*

Sol. By converting the above symbols the value of expression is $24 \div 6 + 5 \times 6 - 14 = 20$.

Direction : In questions 31 to 34 there are two sets of figures, one set contains problem figures while the other has answer-figures. There is a sequence according to which the problem figures are arranged. You have to select an answer-figure which can be added in sequence in the problem-figures. Choose the correct figure.
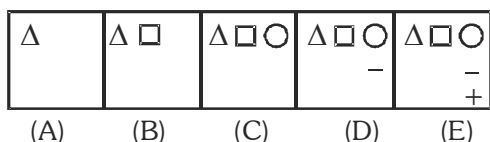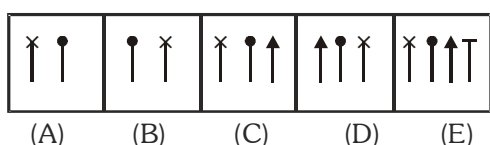
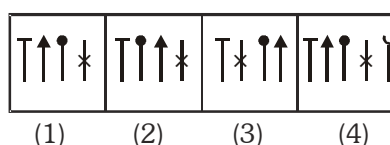**31.** Problem-figures   Answer-figure
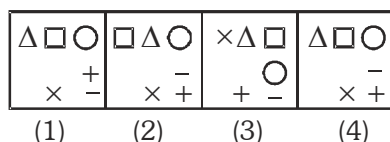
Ans. *(4)*

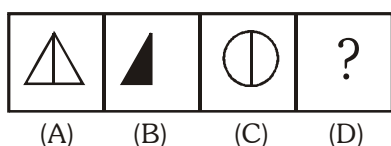Sol. Each time a new symbol is added in the clockwise direction.

32. Problem-figures   Answer-figure

Ans. *(1)*

Sol. Figure (B) is mirror image of figure (A) & figure (C) is mirror image of figure (B) & new symbol added. This sequency of three in repeated next.

33. Problem-figures   Answer-figure
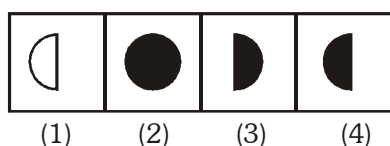
Ans. *(4)*

Sol. By observation half of circle is semi-circle is left side blackned semi-circle.
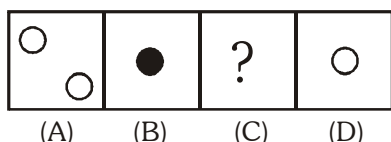
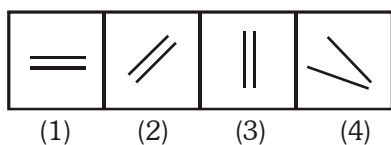**34.** Problem-figures   Answer-figure
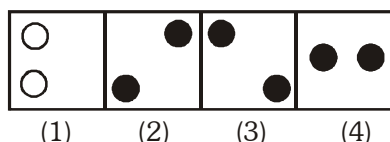
Ans. *(3)*

Sol. By observation from A to B the figure should be figure (3).
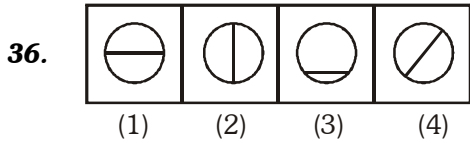
Questions (35 – 37)

Direction :- In aquestions 35 to 37 there are four figures given. One of these does not correlate with the rest of the figures. Find out that odd figure.
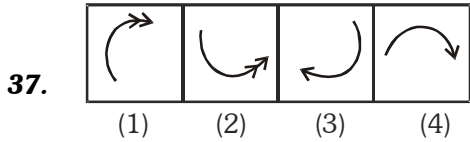
35.

Ans. *(4)*

Sol. Lines are not parallel.
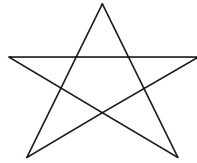
36.

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

Ans. (3)

Sol. Figure is not divided into two equal halves.

37.

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

Ans. (2)

Sol. All are pointing in the clockwise direction except (2).

38. How many triangles are there in the figure below?
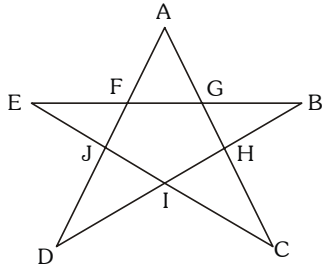

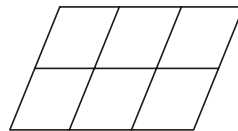(1) 5   (2) 6   (3) 8   (4) 10

Ans. (4)

Sol. By counting the number of triangles are 10.

Triangles are AFG, GBH, HIC, DJI, EFJ, ADH, AJC, EBI, ECG, DFB

39. How many parallelograms are there in the figure below?

(1) 14   (2) 15   (3) 16   (4) 18

Ans. (4)

Sol. Total number of parallelograms $= \left(\dfrac{4 \times 3}{2}\right) \times \left(\dfrac{3 \times 2}{2}\right) = 18$.

Questions (40 – 42)

In questions 40 to 42 find the correct mirror image of the give figure.

40. Questions-figure   Answer-figure

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

Ans. (1)

Sol. is the correct mirror image.

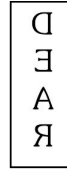**41.** Question-figure   Answer-figures

D		D	R	Я	ᗡ
E		E	A	Ǝ	A
A		A	E	ᗡ	Ǝ
R		R	D		Я
		(1)	(2)	(3)	(4)

Ans. *(4)*

Sol.
ᗡ
Ǝ
A
Я

is the correct mirror image.

42. Question-figure   Answer-figures

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

Ans. *(3)*

Sol. is the correct mirror image.

43. The water image of the given figure
S	B
L	T

is

⊥	⊥		⊥	⊥		S	B		Γ	⊥
B	S		S	B		Γ	⊥		S	B
(1)			(2)			(3)			(4)	

Ans. *(4)*

Sol.
| Γ	⊥
S	B

is the correct water image.

44. The water image of the given figure is

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

Ans. *(1)*
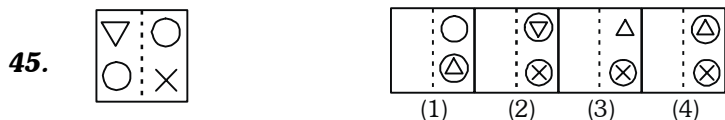
Sol. is the correct water image.

Direction: In the following Questions 45 - 46, figures showing a sequence of folding a paper are given. Which could resemble the figure in the Answer-figures.

Question-figure   Answer-figures

45.

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

Ans. *(2)*

Sol. After folding the paper option (2) is the correct situation.

46. Question-figures
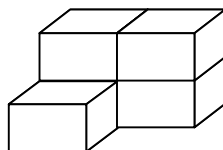

Answer-figures

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

Ans. *(3)*

Sol. After unfolding the paper there will be four × in the final figure.

47. Find the number of blocks when the given stack of blocks is separated :
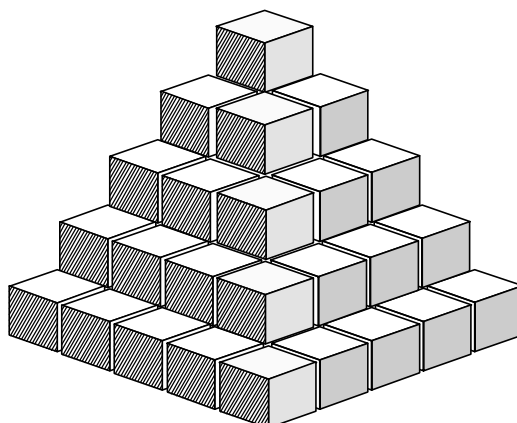

(1) 3   (2) 4   (3) 5   (4) 6

Ans. *(3)*

Sol. There are total $(2 \times 2 + 1) = 5$ blocks.
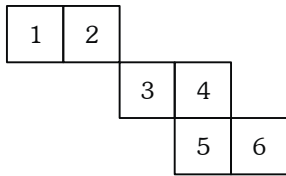
48. In the given figure, the total number of cubes is

(1) 25   (2) 55   (3) 85   (4) 35

Ans. *(2)*

Sol. Total number of cubes = $5 \times 5 + 4 \times 4 + 3 \times 3 + 2 \times 2 + 1 = 55$.

49. In the given figure squaers are folded and cube is formed. Then the number opposite to 2 is

1	2	
	3	4
		5	6

    (1) 1   (2) 3   (3) 5   (4) 6

Ans. *(3)*

Sol. 5 is opposite to 2 as 3 and 6, and 4 and 1 are opposite.

50. In the standard die the sum of opposite faces always remains

    (1) 8   (2) 7   (3) 6   (4) 5

Ans. *(2)*

Sol. In the standard die the sum of opposite faces always remains 7.

* * * * *