MAT-XII (PAPER WITH SOLUTION)

1. As Altimeter is related to height in the same way Fathometer is related to
(1) Intensity of sound   (2) Depth of ocean
(3) Growth in plants   (4) Atmospheric pressure

Ans. **[2]**
Sol. As altimeter is related to height in the same way fathometer in related to depth

2. As Mile is related to Earth in the same way Knot is related to
(1) Ocean   (2) Mountain   (3) Planet   (4) String

Ans. **[1]**
Sol.

3. Select the odd one in the question give below :
(1) Jaipur   (2) Gandhinagar   (3) Shimla   (4) Ajmer

Ans. **[4]**
Sol. All are capitals of state so (4) Ajmer

4. In the following question three pairs follow certain pattern. One pair is different. Select the odd pair.
(1) 8 : 512   (2) 7 : 343   (3) 6 : 216   (4) 15 : 3125

Ans. **[4]**
Sol. 15 : 3125   All are cubes

5. Find the missing term in the following series :
21, 63, 189, _?_ , 1701
(1) 567   (2) 721   (3) 954   (4) 1323

Ans. **[1]**
Sol. 21,63,189,?,1701
$21 \times 3 = 63$, $63 \times 3 = 189$, $189 \times 3 = 567$

6. Choose the missing term out of the given alternatives:
MNBA, NOCB, OPDC _?_ .
(1) PQDE   (2) PQED   (3) DEPQ   (4) DEQP

Ans. **[2]**
Sol. **MNBA, NOCB, OPDC**

7. If in a certain code language 'KANPUR' is coded as 'LBOQVS', then in the same coded language 'NAGPUR' is coded as
(1) BOHQVS   (2) OBHQVS   (3) OHBQVS   (4) DOHBQV

Ans. **[2]**
Sol. KNAPUR ----------> LBOQVS
        +1
NAGPUR ----------> OBHQVS
        +1

8. If in a certain code language 'nee time see' means 'How are you' and 'blee nee see' means 'Where are you', then which term is for 'Where' in that code language?
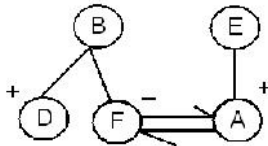(1) blee   (2) nee   (3) time   (4) see.

Ans. **[1]**
Sol.

nee   time   see   how   are   you
blee   nee   see   where   are   you

9. A is son of E, D is son of B, A is married with F, F is the daughter of B. What is the relation of D with A?

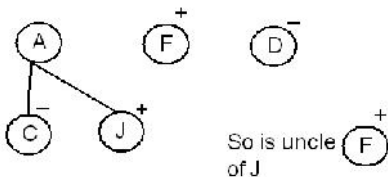(1) Brother   (2) Brother-in-law   (3) Father-in-law   (4) Husband

Ans. **[2]**
Sol.

So D is Brother in law of A.

10. If F is brother of A, C is the daughter of A, D is the sister of F and J is the brother of C then who is the uncle of J?

(1) C   (2) A   (3) D   (4) F
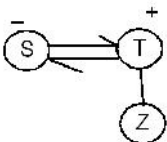
Ans. **[4]**
Sol.

So is uncle F of J

Direction : Give the answer of questions with the help of the following information :

A + B means A is father of B.
A − B means A is wife of B.
A × B means A is brother of B.
A ÷ means A is daughter of B.

11. S − T + Z means

(1) S is mother of Z   (2) Z is the daughter of S
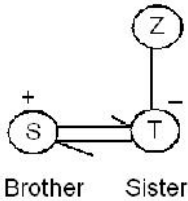(3) S is aunt of Z   (4) S, is sister of Z

Ans. **[1]**
Sol.

S − T + Z

so is mother of Z.

12. S × T ÷ Z means

(1) S is uncle of Z   (2) S is father of Z
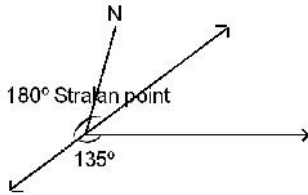(3) S is brother of Z   (4) S is son of Z

Ans. **[4]**
Sol. So S is son of Z.

13. A man facing east. He turns 135º in clockwise direction and then turns 180º in the clockwise direction. Which direction is he facing now?

(1) North-East (2) South-East (3) North-west (4) South -West
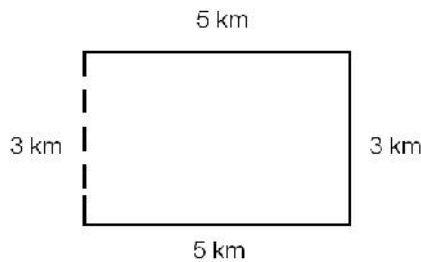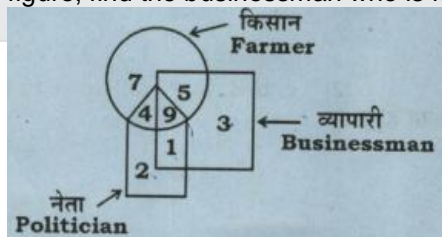
Ans. **[1]**

Sol. North-east

14. A man travels 5 km in the east from his house. Then he turned left and travelled 3 km, then again he turned left and travelled 5 km. Then how far is he from the initial point?
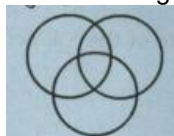
(1) 3 km (2) 4 km (3) 6 km (4) 7 km

Ans. **[1]**

Sol.

15. From the given figure, find the businessman who is farmer but not a politician :
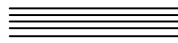

(1) 7 (2) 5 (3) 4 (4) 9

Ans. **[2]**

16. Choose the correct alternative of the given Venn diagram :

(1) Employed, girls, married (2) Hour, minute, second
(3) Vegetable, lady's finger, tomato (4) She-student, girl, boy

Ans. **[1]**
Sol. Employed, Girls, married.

17. Which word cannot be formed from the letters of the word 'ENTERTAINING'?
(1) INERTIA   (2) TRAINING   (3) TERTIARY   (4) TREATING

Ans. **[3]**
Sol. TERTIARY

18. Which letter will be the sixth to left of the twelfth letter from right end of the English alphabet?
(1) H   (2) I   (3) J   (4) G

Ans. **[2]**

19. If a means ÷, b means +, c means -, and d means ×, then the value of 24a6d4b9c8 will be
(1) 17   (2) 25   (3) 8   (4) 16

Ans. **[1]**
Sol. $24 \div 6 \times 4 + 9 - 8 = 17$

20. By interchanging which symbols makes the equation correct?
$35 + 7 \times 5 \div 5 - 6 = 34$
(1) × and -   (2) + and ×   (3) ÷ and -   (4) - and +

Ans. **[4]**
Sol. $35 - 7 \times 5 \div 5 + 6 = 34$

21. The correct order of the following words in English dictionary will be
     a. slunk
     b. slung
     c. slump
     d. slum.

(1) d,c,b,a   (2) c, b, d, a   (3) c, a, d, b   (4) a, b, c, d

Ans. **[1]**

22. What will be the correct sequence of the following?
     a. square
     b. line
     c. angle
     d. triangle
     e. point
(1) e,b,c,d,a   (2) a,c,d,b,e   (3) e,c,b,d,a   (4) e,a,d,c,b

Ans. **[1]**
Sol. e,b,c,d,a

23. What will be the correct sequence of the following?
     (a) school
     (b) child
     (c) college
     (d) salary
     (e) service
(1) b,a,c,d,e   (2) a,c,b,e,d   (3) b,a,c,e,d   (4) d,c,b,e,a

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STSE-4

Ans. **[3]**
Sol. b,a,c,e,d   (child, school, college, service, salary)

24.   In an examination a student scores 3 marks for every correct answer and loses 1 marks for every wrong answer. If he attempts 60 questions and secures 140 marks, the number of incorrect answers is

(1) 45   (2) 15   (3) 50   (4) 10

Ans. **[4]**
Sol. Let no. of right question = R
Let no. of wrong questions = w
According to the question   (i) $3R - W = 140$ .... (1)
                                  (ii) $R + W = 60$ .... (2)
Add eg^n 910 & 92) $4R = 200$ $R = 50$ hence $W = 10$

25.   Age difference between A and B is 10 years. After 16 years A's age will be double B's present age. How old is A now ?

(1) 36 years   (2) 30 years   (3) 26 years   (4) 20 years

Ans. **[1]**
Sol. Let present Age of B = x years
        Then present age of A = $(x + 100)$ years.
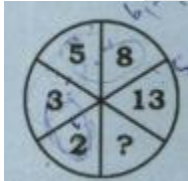After 16 year   A's age (x+10+16)
According to question $(x + 26) = 2(n - x = 26$ $[x = 26]$
Hence A's age is $(26 + 10) = $ **36 years. Ans.**

Questions (26-27)
Direction : Find the missing number (?) in the given figure :

26.

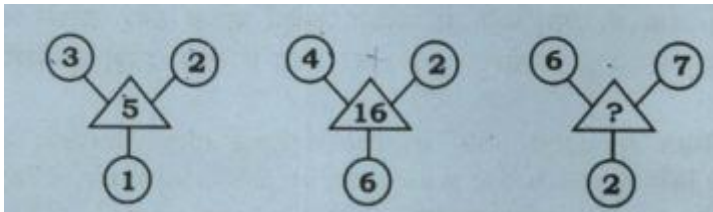(1) 6   (2) 1   (3) 8   (4) 4

Ans. **[2]**
Sol. $? + 2 = 3$
$2 + 3 = 5$
$3 + 5 = 8$
$5 + 8 = 13$ $[? = 1]$

27.

(1) 29   (2) 20   (3) 24   (4) 44

Ans. **[2]**
Sol. $1 \times 2 + 3 = 5$
$6 \times 2 + 4 = 16$
$2 \times 7 + 6 = 20$

28. In the given word/ figure/ sequence how many 4 are there such that just before 4 there is no even number and no vowel and just after 4 there is an even number.

E432M4847U8467464519BB7U

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

Ans. [2]

Sol. E432M4847U8467467464519BB7U
                1   2

Hence there are only 2 4's

Questions (29-30)

Direction : read the following information carefully to answer the given questions :

There are following rules to admit students in a Post-Graduate Management course in an institution. The candidate must –

i)   be a graduate with at least 50% marks

ii)   not be less than 21 years on 1st December, 2014

iii)   have paid Rs. 50,000 at the time of admission.

However if a candidate fulfils all other criteria except –

a)   at (i) above, but has a working experience at least for 2 years, his/her case is to be referred to Admission President.

b)   at (iii) above, but has deposited Rs. 30,000 and rest of sum in a month, then his/her case is to be referred to Director.

Give answers with the help of the following information :

a)   The candidate is to be admitted.

b)   The candidate is not to be admitted.

c)   The case is to be referred to Admission President.

d)   The case is to be referred to Director

29. Ram Sharma has secured 58% in the degree examination and he has been working for the last 4 years,. He was born on 28th January, 1989, He can deposit Rs. 50,000 at the time of admission.

(1) a   (2) b   (3) c   (4) d

Ans. [1]

Sol. Satisfies all three statements given.

30. Sonu Verma is a graduate with 1st class. He has been working in an organization for last 4 years. He was born on 30th july, 1988. He can deposit Rs. 35,000 at the time of admission and rest of the sum in a weak.

(1) a   (2) b   (3) c   (4) d

Ans. [4]

Sol. Satisfies statements I, II & (b)

Question (31- 32)

Direction : In Question Nos. **31 and 32** 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 one figure from the set of answer-figures which can be placed in sequence after the set of problem-figures. Find out the correct figure.
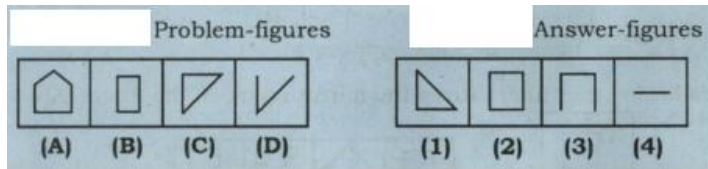
31.
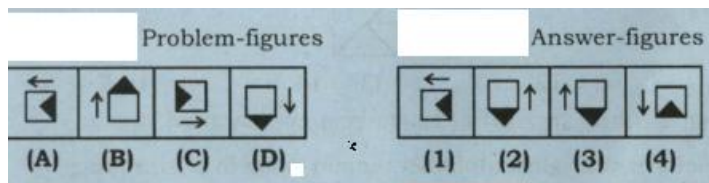
Ans. [1]

Sol. Arrow is moving is antilock wise direction and head of the arrow going in opposite direction. Only option (1) Satisfies.
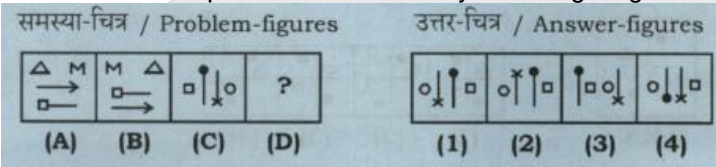
32.

Ans. [4]
**Sol.** No. of sides decreasing

33. Question contains two sets of figures. Figures A, B, C, and D are problem-figures and figures 1,2,3 and 4 are answer-figures. There is a definite relationship between figures A and B. Establish a similar relationship between C and D by choosing a figure D from the answer-figures.

Ans. [1]

34. In the following question there are four figures. One of these does not correlate with the rest of the figures. Find out the odd figure.
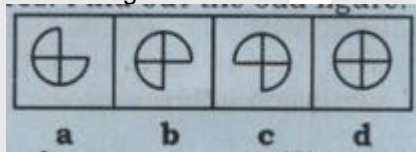
(1) a   (2) b   (3) c   (4) d

Ans. [4]
Sol. Figure is complete while other are incomplete.

35. How many triangles are there in the figure given below?

(1) 7   (2) 8   (3) 9   (4) 10

Ans. [3]

36. How many triangles are there in the figure given below?
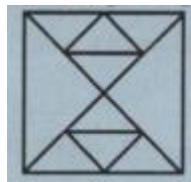
(1) 10   (2) 12   (3) 14   (4) 16 or more

Ans. [4]

37. How many letters in English alphabet remain same in mirror image?

    (1) 8   (2) 9   (3) 10   (4) 12

Ans. **[3]**

Sol. **No option is present in question thre are 11 letters.**
        A,H,I,M,O,T,U,V,W,X,Y

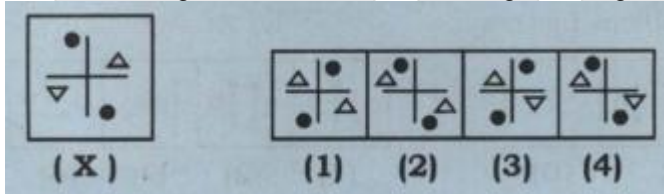**38.** Out of the following four alternatives the mirror image of the figure(X) is
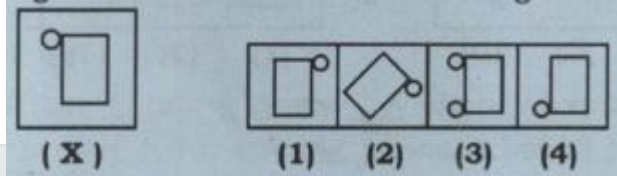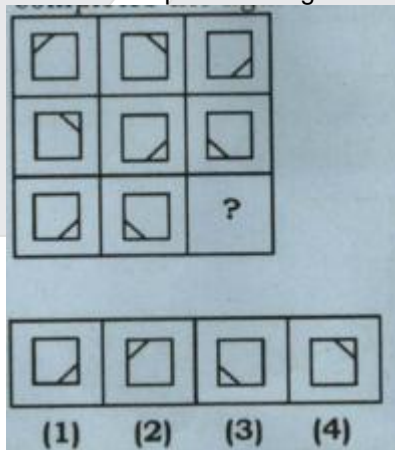

Ans. **[1]**

39. Water image of **MPARI** is

Ans. **[4]**

40. Out of the four following alternatives the water image of the given figure (X) is

Ans. **[3]**

41. Which of the alternatives completes the figure matrix?

Ans. **[2]**

42 Which of the following alternatives represents grouping of similar figures in the given figures?**.**

  (1) ad, bc, ef   (2) ae, bf, dc   (3) af, bc, de   (4) ab, cf, de

Ans. **[1]**

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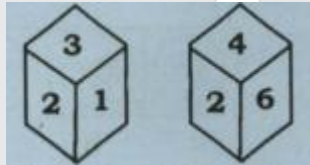Educating for better tomorrow
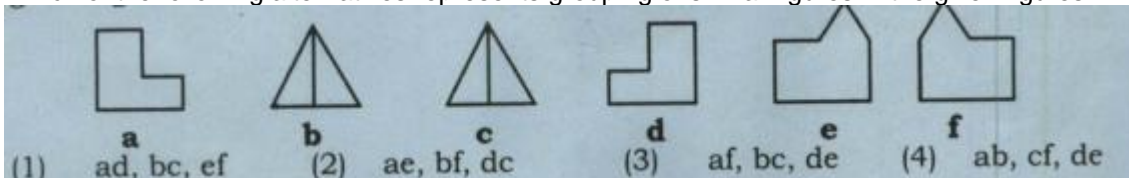
43. The number of cubes in the given figure is
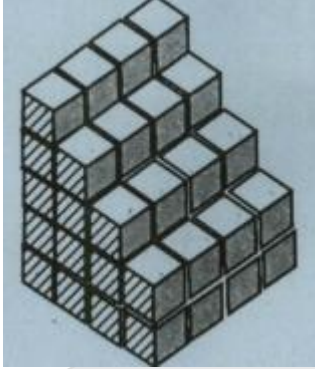
(1) 20   (2) 30   (3) 56   (4) 60

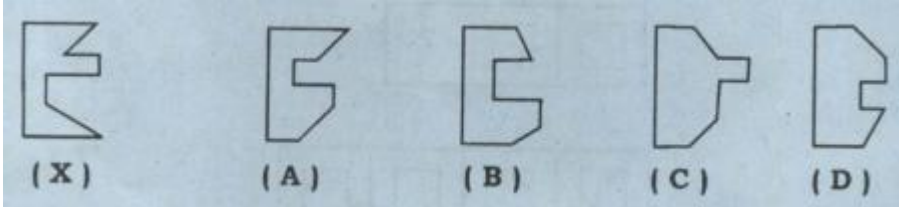**Ans.** **[3]**

44. The two positions of a dice are shown. Write down the number at the bottom when the top is 2:

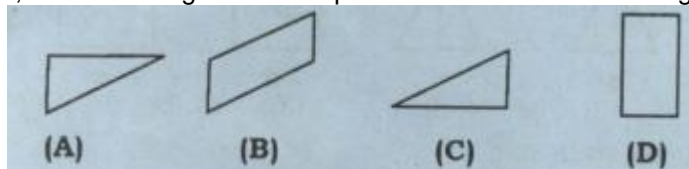(1) 1   (2) 4   (3) 5   (4) 6

Ans. **[3]**

45. In the following question a key figure is marked X and four alternative figures A, B, C and D are given. Select a correct alternative which fits exactly in key figure X to form complete square :
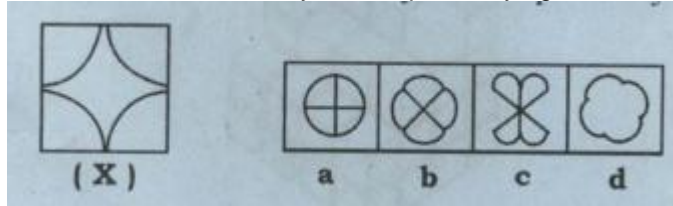

(1) A   (2) B   (3) C   (4) D

Ans. **[2]**

46. Four figures A, B, C and D are given in the question. Which of the three figures will form a square?


(1) ABD   (2) ABC   (3) ACD   (4) BCD

Ans. **[2]**

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STSE-9

47. Which of the given alternatives will exactly make up the key-figure X?

(1) a   (2) b   (3) c   (4) d
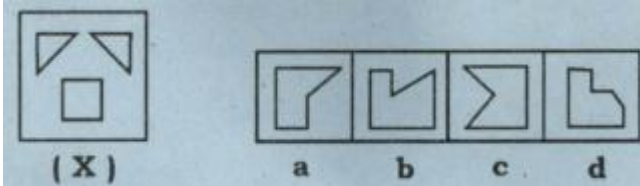
Ans. **[1]**

48. In the following figure, find out how the key figure (X) will look like after 180º anti-clockwise rotation?
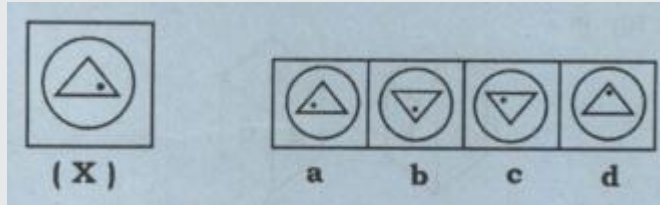
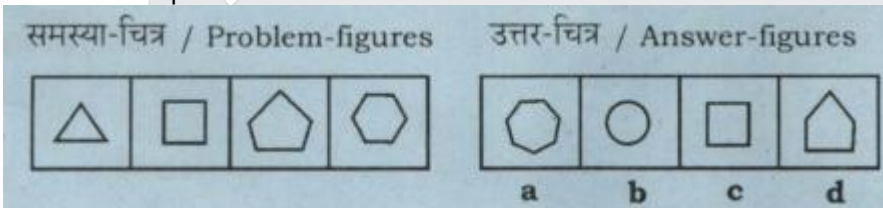(1) a   (2) b   (3) c   (4) d

Ans. **[3]**

49. Which correct answer-figure will be formed by joining the parts of the figure (X)?

(1) a   (2) b   (3) c   (4) d

Ans. **[3]**

50. The four problem-figures have certain common patterns. Which pattern figure from answer-figures has the same pattern?

(1) a   (2) b   (3) c   (4) d

Ans. **[1]**
Sol. No. of sides are increasing.

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STSE-10