NTSE PAPER 2012 (MIZORAM)
STAGE-1
(MAT)

Time allowed : One & half hours (90 Minutes)   **Maximum Marks : 90**

Direction (1-5) : In each of the following questions, the numbers are arranged in a particular order or pattern. Choose the missing number from the given alternatives.

1.   5, 9, 16, 29, 54, 103, ?
(a) 94   (b) 102   (c) 103   (d) 200   (e) 202
Ans. **(d)**
Sol. $5 \times 2 - 1 = 9$
$9 \times 2 - 2 = 16$
....
....
$103 \times 2 - 6 = 200$

2.   4, 5, 7, 10, 11, 13, 16, ?
(a) 48   (b) 38   (c) 20   (d) 19   (e) 18
Ans. **(c)**
Sol. Difference between
consecutive numbers is increasing
so, 16 + 4 = 20

3.   2, 5, 10, 17, ?, 37, 50
(a) 21   (b) 23   (c) 26   (d) 37   (e) 50
Ans. **(c)**
Sol.

4.   3, 9, 17, 27, ? ?
(a) 33   (b) 37   (c) 39   (d) 40   (e) 41
Ans. **(c)**
Sol. 3 + 6 = 9
9 + 8 = 17
17 + 10 = 27
27 + 12 = 39

5.   47, 53, 59, ? 67, 71
(a) 61   (b) 63   (c) 64   (d) 65   (e) 66
Ans. **(b)**
Sol.

Direction (6-7) : Find the wrong number in the series :

6.   2, 3, 4, 4, 6, 8, 9, 12, 16
(a) 3   (b) 4   (c) 6   (d) 8   (e) 9
Ans. **(d)**
Sol.

FIITJEE   **1**

7. 4, 8, 16, 30, 88, 164
Sol. Data is incorrect

Direction : Read each question carefully and identity the relationship between the first two words/numbers, use that relationship to find out the word/numbers of pair of words/numbers which when substituted for the question mark maintains the same relationship

8. SAVE : RESCUE : : SELDOM : ?
(a) Frequently   (b) Rare   (c) Usually   (d) Mostly   (e) Often
Ans. (b)
Sol. save is related to rescue, similarly seldom is related to rare.

9. MUCH : MORE : : ? : ?
(a) Good : Best   (b) Few : Least   (c) Ugly : Scary   (d) Bad : Worse   (e) Sweet : Caramel
Ans. (d)
Sol. MUCH is related to MORE , similarly Bad is related to Worse.

10. 12 : 35 : : 16 : ?
(a) 40   (b) 52   (c) 53   (d) 62   (e) 63
Ans. (e)
Sol. $\dfrac{12}{2} = 6$

then $6^2 - 1 = 35$, similarly $\dfrac{16}{2} = 8$ then $8^2 - 1 = 63$

11. NATION : FLAG : : ? : ?
(a) School : Uniform
(b) Emblem : Sign
(c) House : Child
(d) Company : Biscuits (e) Organisation : Location
Ans. (a)
Sol. FLAG represents NATION similarly uniform represents school.

12. HATE : HATRED : : ? : ?
(a) Love : Lovable
(b) Catch : Caught
(c) Deep : Depth
(d) Fault : Fault line   (e) Great : Greater
Ans. (c)
Sol. HATE is related to HATRED , similarly deep is related to depth.

Direction (13-17) : In each of the following questions, five choices have been given out of which four are alike in some manner, while one is different. Choose the one which is different from the rest.

13. (a) APPLE   (b) KITES   (c) ROGUE   (d) POWER   (e) PALLET
Ans. (c)
Sol. Except ROGUE all are not alive.

14. (a) c d f f g   (b) a b d d e   (c) l m o o p   (d) o p r r s   (e) g r t u u
Ans. (e)
Sol. in every option Except grtuu, specific pattern is there.

15. (a) 459   (b) 189   (c) 642   (d) 357   (e) 678
Ans. (e)
Sol. In every option last digit divides first two digits.

16. (a) (131 + 121), (131 – 121)
(b) (134 + 235), (431 – 532)
(c) (512 + 111), (205 – 111)
(d) (602 + 923), (206 – 329)
(e) (807 + 509), (708 – 905)
Ans. (c)
Sol. In every option like (131 + 121) is written as (131 – 121) means reversing all the digits but this pattern is missing in option (c)

**17.** (a) Kite   (b) Vulture   (c) Hawk   (d) Bat   (e) Duck
Ans. (d)
Sol. Except option (d) all are birds.

18. Statements
I : Some cubes are squares.
II : All squares are circles.
Conclusions:
I. All cubes are circles
II. Some circles are cubes.
III. Some circles are squares.
IV. All squares are cubes.
(a) Only conclusion I follows
(b) Only conclusions I, II and II follow
(c) All conclusions follow
(d) Only conclusions II and III follow
(e) No conclusion follows
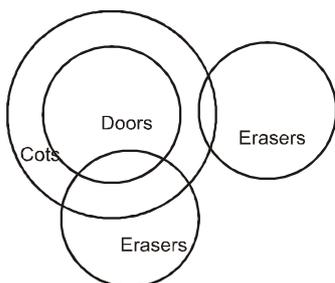
Ans. **(d)**
Sol.
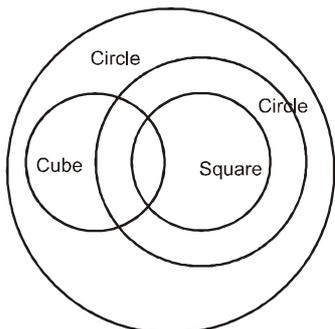
by figure only conclusion II and III follows.

19. Statements :
I : All doors are cots
II : Some cots are erasers.
Conclusions :
I. Some doors are erasers.
II. All cots are doors
III. Some cots are doors.
IV. Some erasers are doors.
(a) Only conclusions III and IV follow
(b) Only conclusions I and II follow
(c) Only conclusions III follows
(d) Only conclusions IV follow
(e) All conclusions follow

Ans. **(c)**
Sol.

By figure only conclusion III follows.

20. Statments :
I : All parrots are koels   II : No koel is goat
Conclusions :
I. No parrot is goat   II. Some parrots are goats
III. All koels are parrots.
IV . Some goats are parrots
(a) Only conclusion I follows
(b) Only conclusion III follows
(c) Only conclusion II and III follows
(d) Only conclusion IV follows
(e) No conclusion follows

Ans. **(a)**

Sol.

by figure Only conclusion I follows.

21. Statements :
I : Some pencils are papers   II : Some papers are boxes
Conclusions :
I. Some pencils are boxes.   II. Some boxes are pencils
III. Some boxes are papers   IV. Some papers are pencils.

(a) Only conclusions I and II follow.   (b) Only conclusions II and III follow
(c) Only conclusions III and IV follow   (d) All conclusions follow
(e) No conclusion follow

Ans. **(c)**
Sol.

By figure only conclusions III and IV follow

22. Manuni went to the movies nine days ago. She goes to the movies only on Thursday. What day of the week is today ?
(a) Sunday   (b) Tuesday   (c) Thursday   (d) Friday   (e) Saturday

Ans. **(e)**
Sol. Total 9 days having 2 odd days. She goes 2 days ago so, today is Saturday.

23. If the fifth day of month is Friday, Which of the following will be the seventh day from 10th of that month?
(a) Wednesday   (b) Thursday   (c) Friday   (d) Saturday   (e) Sunday

Ans. **(a)**
Sol. Fifth Day of a month is Friday so, 10th of the month is Wednesday, now seventh day from 10th is also Wednesday.

24. If 21st November falls five days before Wednesday, then what will be the day on 25th December?
(a) Monday   (b) Tuesday   (c) Wednesday   (d) Thursday   (e) Friday

Ans. **(d)**
Sol. 21st Nov. is Friday, so the day on 25th Dec. is Thursday.

25. A clock is so placed that at 12 noon, its minute hand points towards north-east. In which direction does its hour hand point at 1 : 30 pm. ?
(a) East   (b) West   (c) North   (d) South   (e) South-East

Ans. **(a)**
Sol.

At 1.30 pm. Hour Hand
Points towards East

26. If in a clock, the numbers 1 to 12 are replaced with alphabet starting from F, then, which of the following options shall indicate the time as 9 O'clock?

(a) M - P   (b) P - M   (c) N - P   (d) Q - N   (e) N - Q

Ans. **(e)**

Sol.

27. Introducing a man, a woman said, "His mother is the only daughter of my father". How is the man related to the woman ?

(a) Father   (b) Uncle   (c) Husband   (d) Brother   (e) Son

Ans. **(e)**

Sol.

That man is the son of that woman.

28. A couple has five married sons and each one of them have four children. How many members are there in the family?

(a) 10   (b) 27   (c) 30   (d) 32   (e) 41

Ans. **(d)**

Sol. Total member = $[2 + (5 \times 2) + (5 \times 4)]$ = 32

29. In family of six persons, A is the grandfather of F. D and E are children of B C. C and D are females. How is B related to C?

(a) Father   (b) Mother   (c) Husband   (d) Wife   (e) Son

Ans. **(c)**

Sol.

Husband

Direction (30-32): The following questions are based on the following statements :

    (i) In a family of six person A, B, C, D, E and F, there are two married couples.
    (ii) A is son of B.
    (iii) D is grandmother of A and mother of B.
    (iv) F is granddaughter of E.

30. How many male members are there in the family ?

(a) 1   (b) 2   (c) 3   (d) 4   (e) 5

Ans. **(c)**

31. What is C to A ?

(a) Brother   (b) Sister   (c) Father   (d) Mother   (e) Grandmother

Ans. **(d)**

32. Which of the following is true ?
(a) F is sister of A (b) A is sister of F (c) C is father of A   (d) B is mother of F   (e) F is brother of B

Ans. **(a)**

Sol. (30-32)
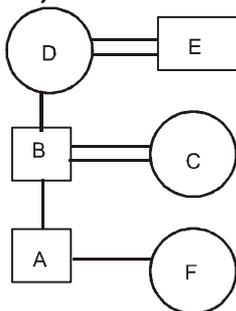
(Family Tree)

33. O, P, Q, R, S and T are standing on a bench according to their height. P is taller than O but shorter than S. Only S is taller than T. R is shorter than P but taller than Q. Who is the taller ?
(a) O   (b) P   (c) Q   (d) R   (e) S

Ans. **(e)**
Sol. P is taller than O but shorter than S and Only S is taller than T. This means S is taller.

34. A lady runs 12 km towards north, then 6 km towards south and then 8 km East. How far is she from her starting point and in which direction ?
(a) 5 km N-E   (b) 5 km E   (c) 5 km N   (d) 10 km N-E   (e) 10 km E

Ans. **(d)**
Sol.
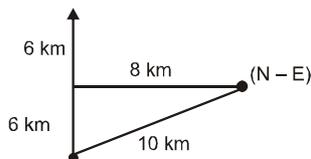
35. A man is walking towards east. What direction should he not follow if he should walk towards north ?
(a) right, right, left, right, right   (b) right, right, left, left, left
(c) right, right, right   (d) right, left, right, left
(e) none of the above

Ans. **(d)**
Sol. if he should walk towards north, he should not follow right, left, right, left.

36. Sarah's house faces South. From there, she runs ahead 10 m, turns left and runs 5 km. Then she turns left again and runs 15 km and then again turns left and runs 10 m. Finally, she turns right and runs 5 m to reach her friend's house. What direction is Sarah's friend's house facing ?
(a) North   (b) South   (c) West   (d) East   (e) South-West

Ans. **(b)**
Sol.
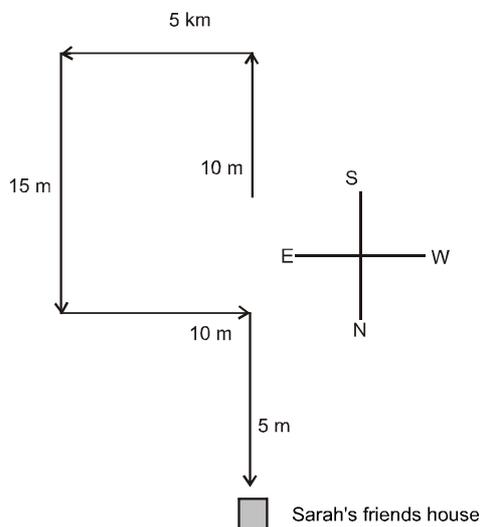
37. Two friends, Jack and Bunny start a race, and together they run for 50 m. Jack turns right and runs 60 m while Bunny turns left and runs 40 m. Then Jack turns left and runs 50 m while Bunny turns right and runs 50 m. How far are the two friends from each other ?

(a) 100m   (b) 60m   (c) 50m   (d) 35m   (e) 20m

Ans. **(a)**

Sol. They are 100m apart.

38. In a certain code language, HJIZT code is deciphered as MONEY, in the same way NOVGZ will be deciphered as :

(a) STUMP   (b) STALE   (c) STICK   (d) SPIRE   (e) STARE

Ans. **(b)**

Sol. In the coding scheme every letter is coded by its fifth succeeded letter.

39. PLANNING is coded in a certain language as UFFHSCSA. How will AUTHORITY be coded in the same language ?

(a) FOYBTLNND (b) FYOTBNNLT (c) FBOYTLNTN (d) FBOYTNLTN (e) FYOBTNNTL

Ans. **(a)**

Sol. In the coding scheme AUTHORITY is coded as FOYBTLNND.

Direction (40-43) : Read the following coding scheme and then answer the question. The word TEMPLE has been coded in five different ways.

(a) VGORNG   (b) ELPMET   (c) WDPOOD   (d) ELPMET   (e) TIMTLI

Which coding scheme has been followed in question 40-43 ?

WORD	CODE

40. NOBLE   NSBPE

Ans. **(e)**

Sol. After analysing the coding scheme option e is for NOBLE.

41. GRAND   ITCPF

Ans. **(a)**

Sol. After analysing the coding scheme option a is for GRAND.

42. JETLAG   MDWKDF

Ans. **(c)**

Sol. After analysing the coding scheme option c is for JETLAG.

43. DETERMINE   ENIMRETED

Ans. **(b)**

Sol. After analysing the coding scheme option b is for DETERMINE.

44. In a certain code language, 'pit dar na' means 'you are good'; 'dart ok pa' means 'good and bad'; 'tim na tok' means 'they are bad'. In that language, which word stands for 'they' ?

(a) na   (b) tok   (c) tim   (d) pit   (e) dar

Ans. **(c)**

Sol. tim is the code for they. After elimination of code of are and bad.

45. If red is called 'air', air is called 'black', black is called 'sky', sky is called 'blue', blue is called 'wind' and wind is called 'white', where do birds fly ?

(a) air   (b) sky   (c) wind   (d) blue   (e) black

Ans. **(d)**

Sol. Birds fly in sky and sky is called blue.

Direction (46 – 49) : Refer to the given diagram and answer the questions given below :
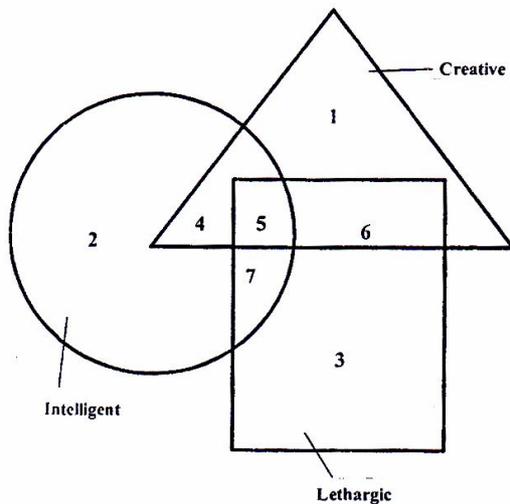
46. Which number represents those persons who are creative and lethargic ?
(a) 1   (b) 3   (c 4)   (d) 4   (e) 6
Ans. **(e)**
Sol. 6 represents those persons who are creative and lethargic.

47. Which number represents those persons who are intelligent and lethargic ?
(a) 7   (b) 6   (c) 5   (d) 4   (e) 3
Ans. **(a)**
Sol. 7 represents those persons who are intelligent and lethargic.

48. Which number represents those persons who are intelligent, lethargic as well as creative ?
(a) 2   (b) 4   (c) 5   (d) 6   (e) 7
Ans. **(c)**
Sol. 5 represents those persons who are intelligent, lethargic as well as creative.

49. Which number represents those who are intelligent but neither lethargic nor creative ?
(a) 1   (b) 2   (c) 4   (d) 5   (e) 6
Ans. **(b)**
Sol. 2 represents those who are intelligent but neither lethargic nor creative.

Direction (50 – 54) : From the five logical diagrams given below, select the one which best illustrates the relationship among the three given classes in the following questions.
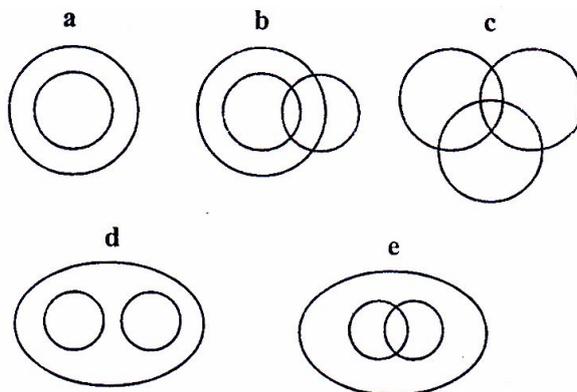
50. Birds, Fruits, Mangoes.
Ans. **(a)**
Sol. Mangoes lie in fruits and birds are different.

51. Swimmers, Bachelors, Men
Ans. **(e)**
Sol. Some men are bachelors and not necessary all are swimmers.

52. Smart, Engineers, Women.
Ans. **(c)**
Sol. Women can be engineers as well as smart.

53. Doctors, Architect, Humans.
Ans. **(d)**
Sol. Doctors and Architect are different and all are humans.

54. Scholars, People, Indians.
Ans. **(e)**
Sol. Some people are scholars and all are Indian.

Direction (55 – 56) : The numbers inside the figure given below follow some rules. Identify the number which when substituted for the question mark (?) maintains that rule.

55.

1	2	3
4	5	6
4	?	18

(a) 7   (b) 8   (c) 9   (d) 10   (e) 14

Ans. **(d)**
Sol. $1 \times 4 = 4$
$2 \times 5 = 10$
$3 \times 6 = 18$

56.

13	16	17
23	16	37
59	?	91

(a) 32   (b) 40   (c) 48   (d) 50   (e) 61

Ans. **(c)**
Sol. $23 \times 2 + 13 = 59$ similarly $16 \times 2 + 16 = 48$.

Direction : (57 – 61) : In each of the following questions, a paper is folded and cut with scissor as shown in the problem figures given below. You have to select from the answer figures a, b, c, d and e, a figure which will appear on the unfolded paper shown in the third problem figure.

57. Problem Figures   Answer Figures
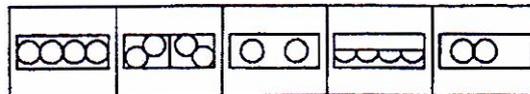
Ans. **(a)**
Sol. After visualising the figure option a is correct.

58. Problem Figures   Answer Figures

Ans. **(b)**
Sol. After visualising the figure option b is correct.

59. Problem Figures   Answer Figures

                                        a   **b**   **c**   **d**   **e**

Ans. **(b)**
Sol. After visualising the figure option b is correct.
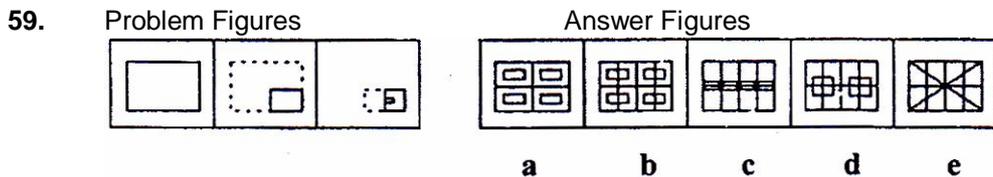
60. Problem Figures   Answer Figures

                                        a   **b**   **c**   **d**   **e**

Ans. **(e)**
Sol. After visualising the figure option e is correct.

61. Problem Figures   Answer Figures

                                        a   **b**   **c**   **d**   **e**
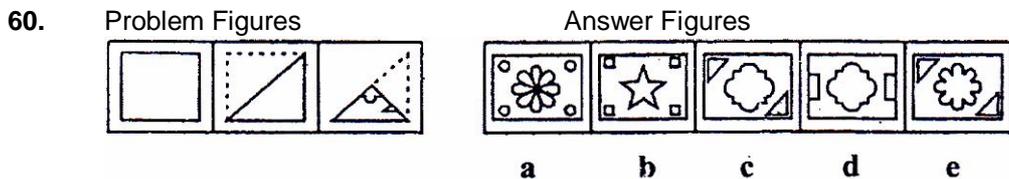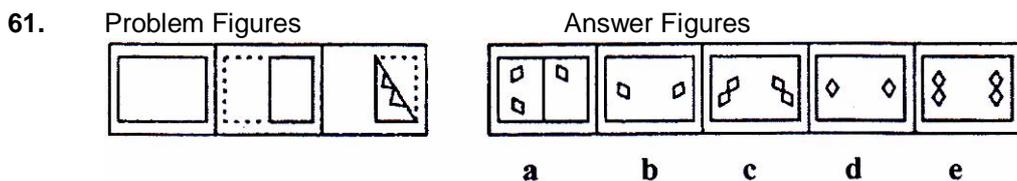
Ans. **(c)**
Sol. After visualising the figure option c is correct.

Direction : (62 – 66) : In each of the following questions, there are two sets of figure – problem figures and answer figures. Problem figures form some kind of series. You have to select one figure from the answer figures which will continue that series.

62. Problem Figures   Answer Figures

                                        A   **B**   **C**   **D**   **E**
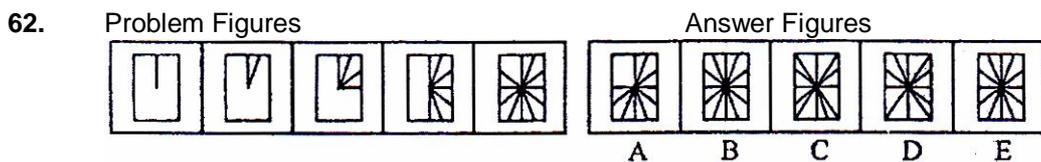
Ans. **(b, e)**
Sol. After visualising the figure option b, e is correct
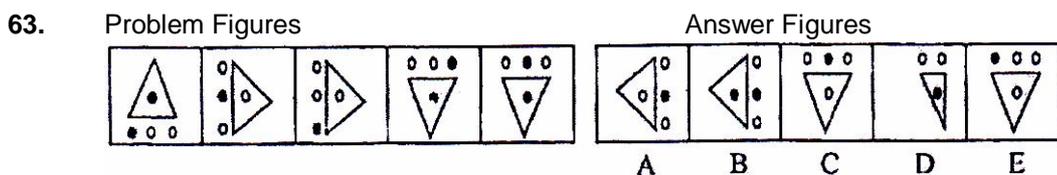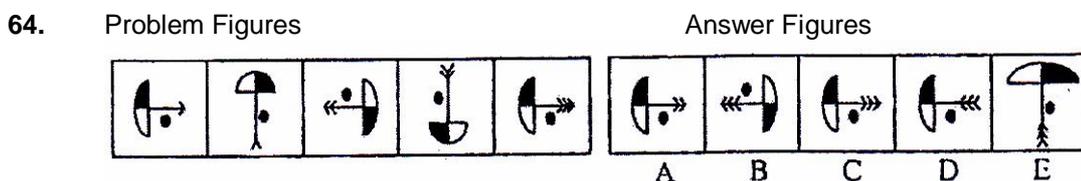
63. Problem Figures   Answer Figures

                                        A   **B**   **C**   **D**   **E**

Ans. **(a)**
Sol. After visualising the figure option a is correct.

64. Problem Figures   Answer Figures

                                        A   **B**   **C**   **D**   **E**

Ans. **(e)**
Sol. After visualising the figure option e is correct.

65. Problem Figures   Answer Figures

                                        A   **B**   **C**   **D**   **E**
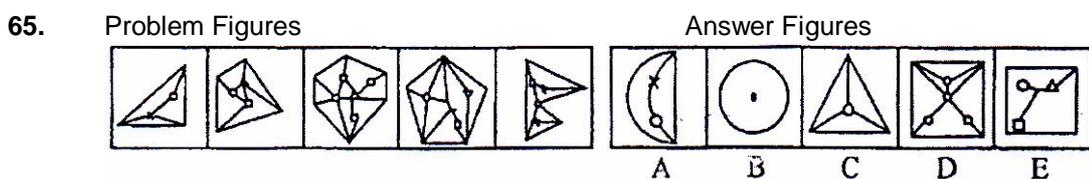
Ans. **(c)**
Sol. After visualising the figure option c is correct

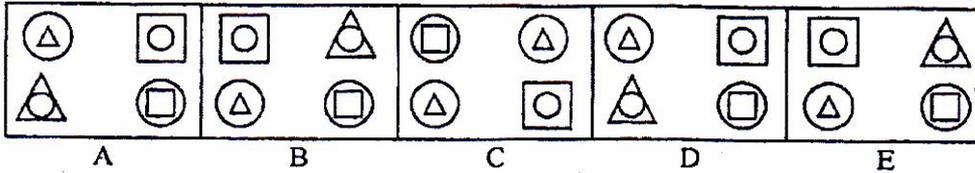**66.** Problem Figures   Answer Figures
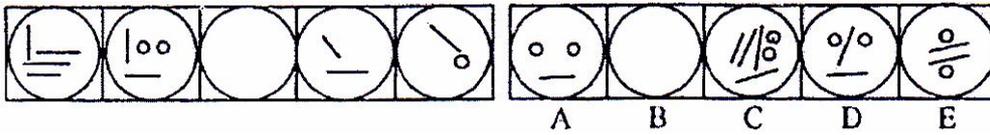
Ans. **(b)**
Sol. After visualising the figure option b is correct.

Direction : (67 – 71) : In each of the following questions, out of the five figures A, B, C, D and E, four are similar in a certain way. One figure is not like the other four. Choose the figure which is different from the rest.
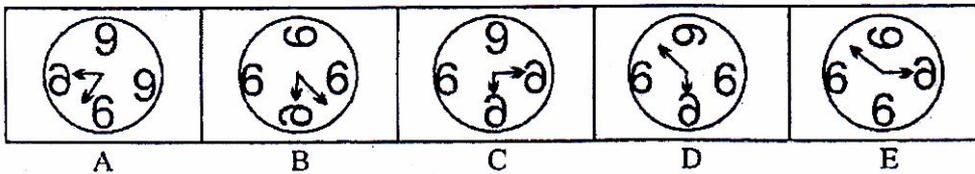
67.

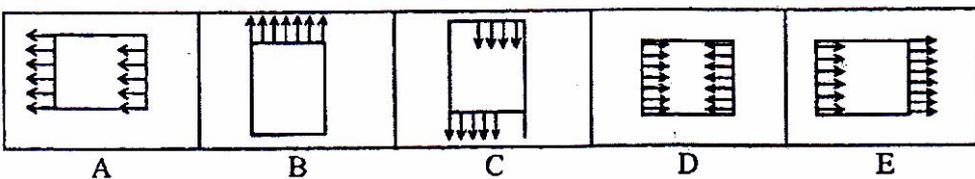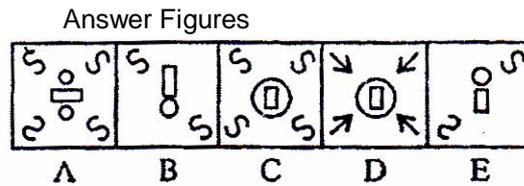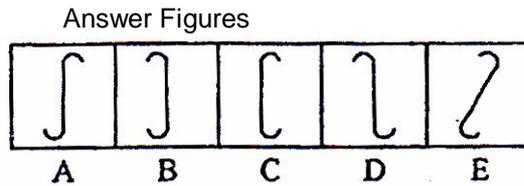**Ans.** **(c)**
Sol. After visualising the figure option c is correct.

68.

Ans. **(c)**
Sol. After visualising the figure option c is correct.

69.

Ans. **(b)**
Sol. After visualising the figure option b is correct.

70.
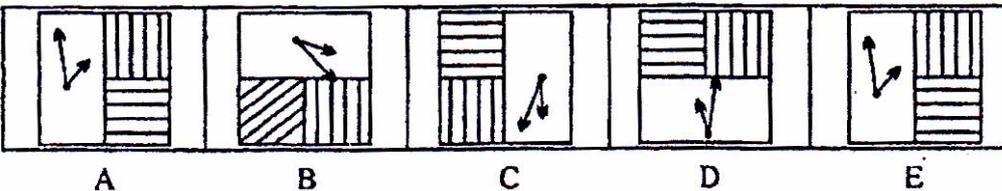
Ans. **(b)**
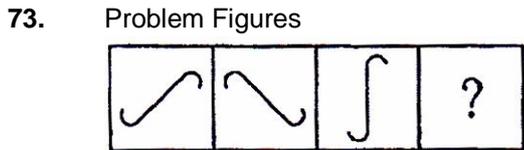**Sol.** After visualising the figure option b is correct.

71.
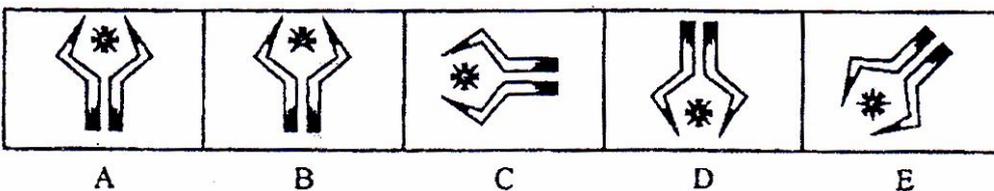
Ans. **(e)**
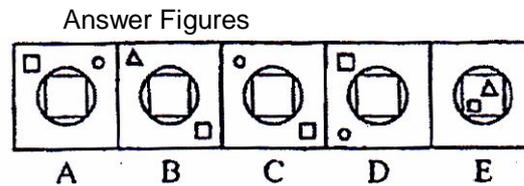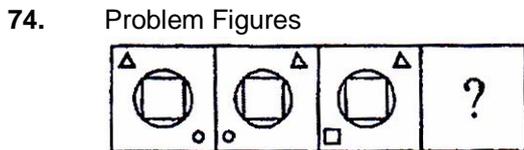**Sol.** After visualising the figure option e is correct.

Direction : (72 – 76) : In each of the following questions, there are two sets of figures – problem figure and answer figures. In the problem figures, there is a definite relationship between the first two figures. Establish a similar relationship between the third and fourth figures by choosing a suitable figure from the set of answer figures.
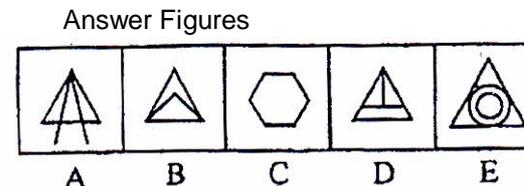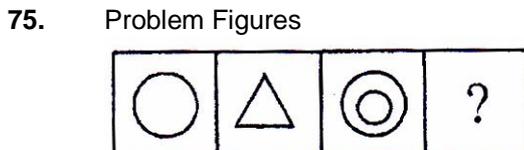
72.   Problem Figures   Answer Figures

Ans.   **(c)**
Sol.   After visualising the figure option c is correct.

73.   Problem Figures   Answer Figures
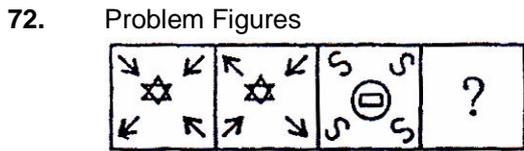
Ans.   **(d)**
Sol.   After visualising the figure option d is correct.

74.   Problem Figures   Answer Figures

Ans.   **(b)**
Sol.   After visualising the figure option b is correct.

75.   Problem Figures   Answer Figures

Ans.   **(b)**
Sol.   After visualising the figure option b is correct.

76.   Problem Figures   Answer Figures
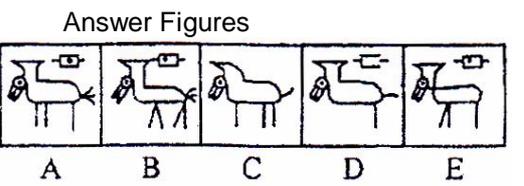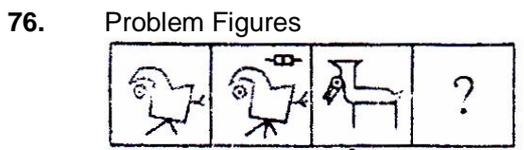
Ans.   **(b)**
Sol.   After visualising the figure option b is correct.

77.   If D stand for '+' A stand for '–', B stand for '×', C stands for '÷', then what is the value of 21D3A1B8C5 ?
        (a) 46   (b) 42   (c) 36   (d) 32   (e) none of these
Ans.   **(e)**
Sol. $21 + 3 – 1 \times 8 \div 5 = 22.4$

78.   If + means ÷, – means × , × means + and ÷ means –, then the value of 6 + 2 ÷ 3 × 4 – 3 is ?
        (a) 6   (b) 8   (c) 10   (d) 12   (e) 14
Ans.   **(d)**
Sol. $6 \div 2 – 3 + 4 \times 3 = 12$

79.   If 30 – 20 = 40 and 20 – 15 = 20, then 50 – 30 = ?
        (a) 60   (b) 70   (c) 80   (d) 90   (e) 100
Ans.   **(c)**
Sol. $50 – 30 = 20 \times 4 = 80$

80. If 3 = 0, 4 = 4, 5 = 10, then, 7 = ?
(a) 14   (b) 18   (c) 21   (d) 24   (e) 28
Ans. **(e)**
Sol. $3 \times 0 = 0$, $4 \times 1 = 4$, $5 \times 2 = 10$, So $7 \times 4 = 28$

81. If H = 8 and P = 11, what is the value of ARM ?
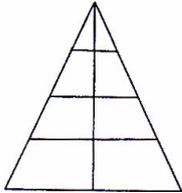(a) 23   (b) 32   (c) 35   (d) 49   (e) 58
Ans. **(a)**
Sol. ARM = 1 + 9 + 13 = 23

82. If HE = 13 and MEN = 32, what will MENTAL equals ?
(a) 97   (b) 91   (c) 87   (d) 72   (e) 65
Ans. **(e)**
Sol. 32 + 20 + 1 + 12 = 65

83. Find the number of triangles in the figure below :

(a) 10   (b) 12   (c) 13   (d) 14   (e) 15
Ans. **(e)**
Sol. Total number of triangles = 15.

Direction : (84 – 87) : Select the alternative whose alphabets when placed at the missing places, complete the series.

84. b _ a _ bab _ ab _ a
(a) abab   (b) abbb   (c) baba   (d) bbab   (e) aaab
Ans. **(a)**
Sol. abab is correct option.

85. a _ aa _ a _ baa _ aaba
(a) bbba   (b) bbab   (c) bbaa   (d) baab   (e) baba
Ans. **(b)**
Sol bbab is correct option.

86. kal _ _ lal _ aka _ lala _ la
(a) lalal   (b) alall   (c) lalll   (d) allal   (e) laall
Ans. **(e)**
Sol. laall is correct option.

87. _ a _ _ aa _ aab _ a
(a) abaab   (b) ababb   (c) aabab   (d) babba   (e) abbaa
Ans. **(d)**
Sol. babba is correct option.

88. You are ninth in the queue from either end. How many people are there in the queue ?
(a) 16   (b) 17   (c) 18   (d) 19   (e) 20
Ans. **(b)**
Sol. 8 + 8 + 1 = 17

89. Arrange the following in a systematic order :
1. Fruits   **2. Roots**   **3. Trunks**   **4. Leaves**   **5. Flowers**
6. Branches
(a) 2, 3, 6, 4, 5, 1   (b) 3, 2, 5, 1, 6, 4   (c) 1, 3, 6, 4, 2, 5   (d) 2, 3, 6, 1, 4, 5   (e) 2, 6, 3, 5, 1, 4
Ans. **(a)**
Sol. Option A is correct Roots → Trunks → Branches → Leaves → Flowers → Fruits.

90. If the words INTIMATION, INFORMATION, INTERESTS, INTERROGATION and INSTIGATION are arranged according to the dictionary, what will be the fourth letter of the last word ?
(a) O   (b) A   (c) R   (d) T   (e) I
Ans. **(e)**
Sol. INTIMATION is the last word so I is the fourth letter.

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