

FIITJEE Solutions to

NTSE – 2012 – Stage I (Andhra Pradesh State)

(For class X Students)

Paper – 1 MAT

DATE OF EXAM: 18-11-2012

Time : 90 Minutes

Max marks: 90

INSTRUCTIONS TO CANDIDATES

Read the following instructions carefully before you answer the question. Answers are to be SHADED on a SEPARATE OMR Answer sheet given, with HB pencil. Read the Instructions printed on the OMR 2 sheet carefully before answering the questions.

1. Please write your Centre Code No. & Roll No. very clearly (only one digit in one block) on the OMR sheet as given in your admission card. Please see that no block is left unfilled and even Zeros appearing in the Centre Code No. are correctly transferred to the appropriate blocks on the OMR sheet as shown in the example given in the OMR sheet. For all the subsequent purpose your Centre CodeNo. and Roll No. shall remain the same as given on the Admission Card.
2. The test is in TWO Parts. Part-I consists of 90 questions and Part-II also consists of 90 questions.
3. All questions in Part-I and Part-II carry one mark each.
4. Since all questions are compulsory, do not try to read through the whole question paper before beginning to answer it.
5. Begin with the first question and keep trying one question after another till you finish both the Parts.
6. If you do not know the answer to any question, do not spend much time on it and pass on to next one. If time permits, you can come back to the questions which you have left in the first instance and try them again.
7. Since the time allotted to the two Parts of this question paper is very limited, you should make the best use of it by not spending too much time on any question.
8. A blank page is provided for rough work at the end of each part.
9. REMEMBER YOU HAVE TO SHADE ANSWERS ON A SEPARATE OMR SHEET PROVIDED.
10. Answer to each question is to be indicated by SHADING the circle having the number of the correct alternative in OMR sheet from among the ones given for the corresponding question in the booklet.
11. Now turn to the next page and start answering the questions.
12. After the examination, you should hand over the OMR sheet to the Invigilator of the room.
13. The candidate need not return this Question paper booklet and can take it after completion of the examination. No candidate should leave the examination hall before the end of the examination.

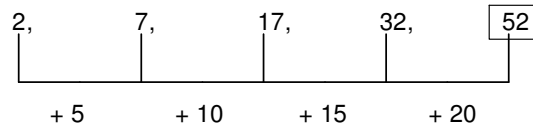
Directions: Questions (1 to 10):

In the number series given below, one number is missing. Each series is followed by five alternatives (1), (2), (3), (4) and (5). One of them is the right answer. Identify and indicate it as per the Instructions".

1. 2, 7, 17, 32,

- (1) 42 (2) 52 (3) 47 (4) 27 (5) 62

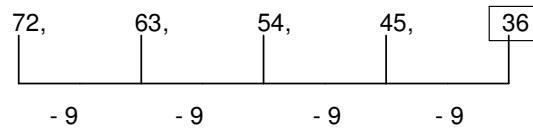
1. (2)



2. 72, 63, 54, 45,

- (1) 36 (2) 81 (3) 27 (4) 90 (5) 18

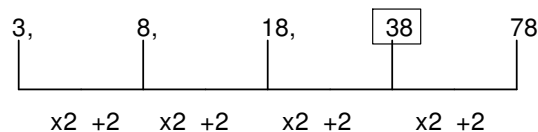
2. (1)



3. 3, 8, 18,, 78

- (1) 38 (2) 50 (3) 28 (4) 48 (5) 58

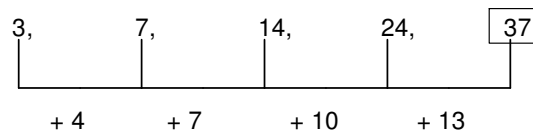
3. (1)



4. 3, 7, 14, 24,

- (1) 34 (2) 28 (3) 38 (4) 40 (5) 37

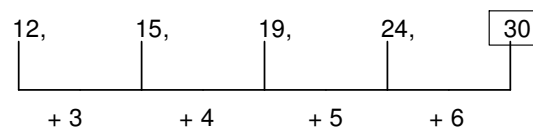
4. (5)



5. 12, 15, 19, 24,

- (1) 29 (2) 32 (3) 30 (4) 34 (5) 31

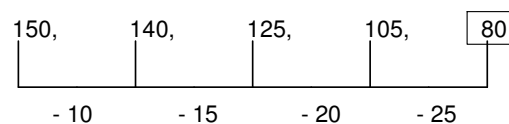
5. (3)



6. 150, 140, 125, 105,

- (1) 90 (2) 80 (3) 85 (4) 75 (5) 95

6. (2)



7. 231, 342, 453, 564,

(1) 576

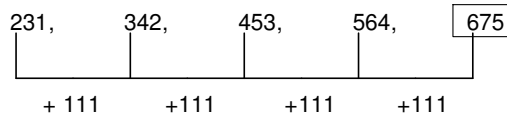
(2) 475

(3) 675

(4) 567

(5) 676

7. (3)



8. 796, 675, 554, 433,

(1) 512

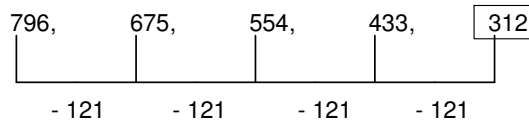
(2) 231

(3) 213

(4) 312

(5) 321

8. (4)



9. 243, 81,9, 3

(1) 28

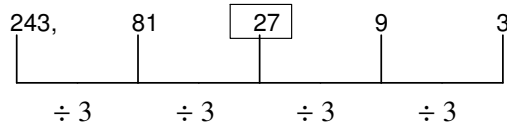
(2) 27

(3) 23

(4) 29

(5) 45

9. (2)



10. 1, 5, 13, 29,

(1) 60

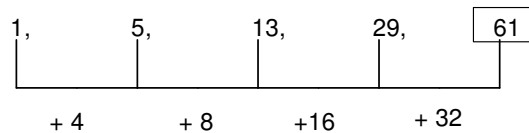
(2) 61

(3) 59

(4) 42

(5) 45

10. (2)

**Directions:**

Questions (11 to 18) are based upon letter analogy. There are two pairs of letter combinations in each question. The first (Left hand side) pair has some relationship between its members. In the second pair one member is missing. Find this out from answers (1), (2), (3), (4) and (5), such that this pair has similar relationship as the first pair. Indicate your answers as per the "Instructions".

11. ABCD: WXYZ :: EFGH : ?

(1) STVU

(2) STOU

(3) STUE

(4) TSUV

(5) STUV

11. (5)

1	2	3	4	:	23	24	25	26
A	B	C	D	:	W	X	Y	Z

In the same way

5	6	7	8	:	19	20	21	22
E	F	G	H	:	S	T	U	V

12. BCD : CEG :: LMN : ?

(1) MOQ

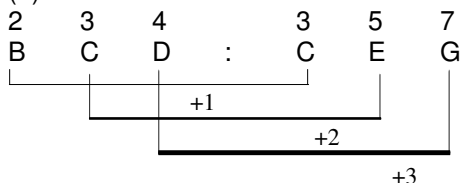
(2) MNP

(3) NOP

(4) NPQ

(5) OPQ

12. (1)



In the same way

12	13	14		13	15	17
L	M	N	:	M	O	Q

13. BAC : DEF :: : NOP

(1) MKL (2) SRT (3) LKM (4) HIJ (5) KLM

13. (3)

2	1	3		4	5	6
B	A	C	:	D	E	F

In the same way

12	11	13		14	15	16
L	K	M	:	N	O	P

14. CBD : FEG :: SRT : ?

(1) UVW (2) WVU (3) VUW (4) VUX (5) UVX

14. (3)

3	2	4		6	5	7
C	B	D	:	F	E	G

In the same way

19	18	20		22	21	23
S	R	T	:	V	U	W

15. CDBE : EFDG :: NOMP : ?

(1) PQRO (2) POQR (3) OPQR (4) NPQO (5) PQOR

15. (5)

3	4	2	5		5	6	4	7
C	D	B	E	:	E	F	D	G

In the same way

14	15	13	16		16	17	15	18
N	O	M	P	:	P	Q	O	R

16. XYZ : CBA :: UVW : ?

(1) DEF (2) EFD (3) DFE (4) FED (5) EDF

16. (4)

24	25	26		3	2	1
X	Y	Z	:	C	B	A

In the same way

21	22	23		6	5	4
U	V	W	:	F	E	D

17. VST : URS :: NKL : ?

(1) KLM (2) MJK (3) KJM (4) JKM (5) JKL

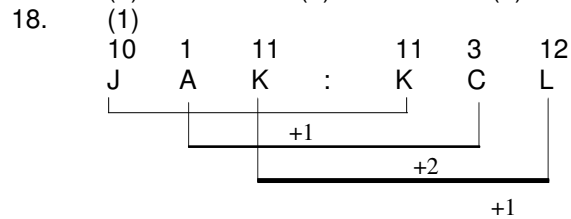
17. (2)

22	19	20		21	18	19
V	S	T	:	U	R	S

In the same way

14	11	12		13	10	11
N	K	L	:	M	J	K

18. JAK : KCL :: MBN : ?
 (1) NDO (2) MDO (3) NDL (4) NEL (5) NEO



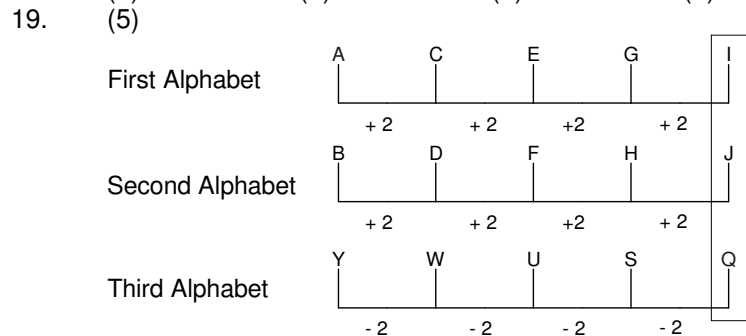
In the same way

13	2	14		14	4	15
M	B	N	:	N	D	O

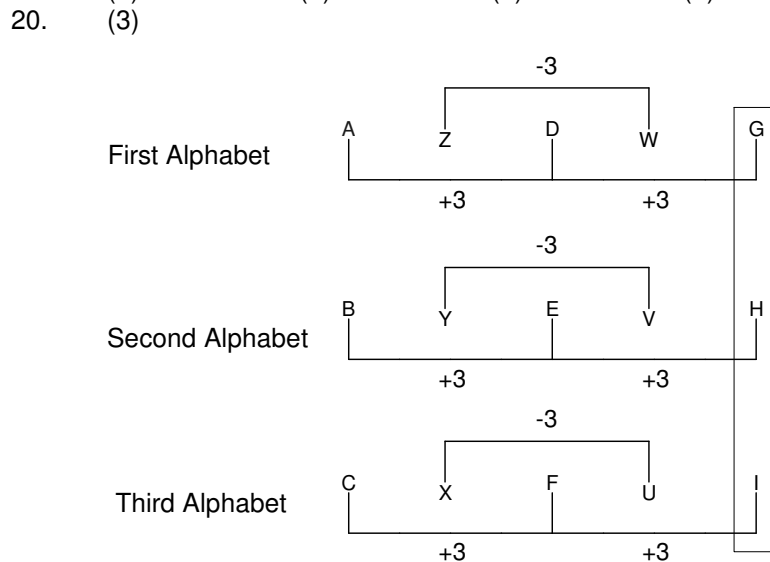
Directions:

Questions (19 to 26) : In the following questions, Letters/ Letter groups, are arranged in a particular order with, some, underlying criterion. Study the order and choose the answer from the alternatives to fill the gaps.

19. ABY, CDW, EFU, GHS,
 (1) IQJ (2) IJS (3) IJR (4) QJI (5) IJQ

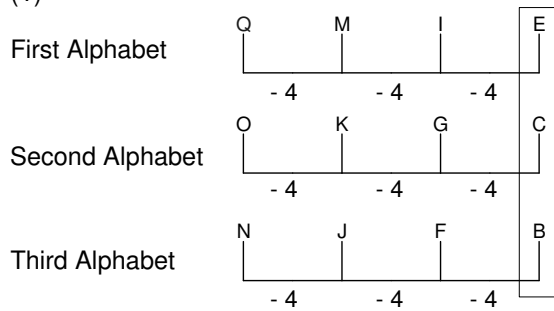


20. ABC, ZYX, DEF, WVU,
 (1) GIJ (2) HIG (3) GHI (4) HIJ (5) EFG



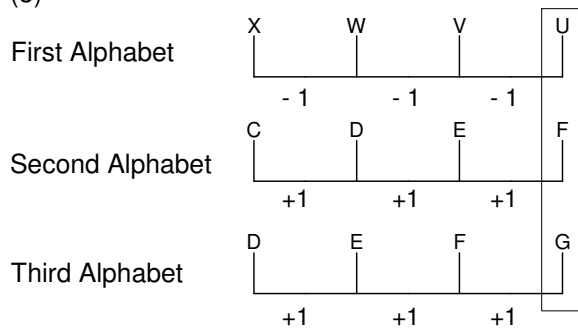
21. QON, MKJ, IGF,
 1) ECB (2) EBC (3) BCE (4) CDE (5) ECD

21. (1)



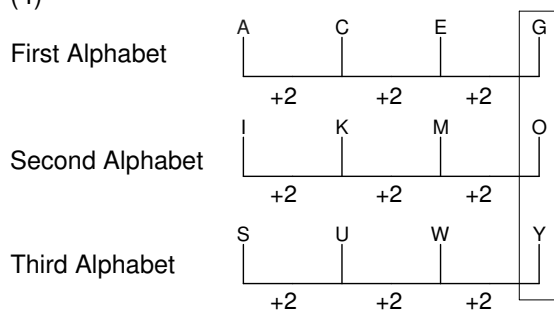
22. XCD,, VEF, UFG
 (1) WED (2) DEW (3) WDE (4) XDE (5) XED

22. (3)



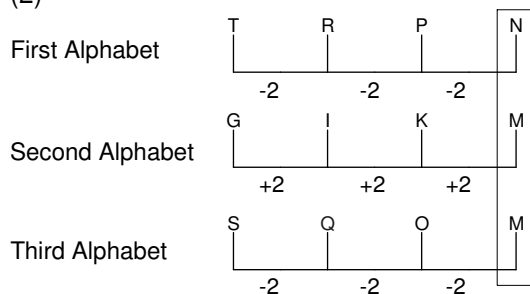
23. AIS, CKU,, GOY
 (1) DMX (2) DMW (3) EMV (4) EMW (5) EMX

23. (4)

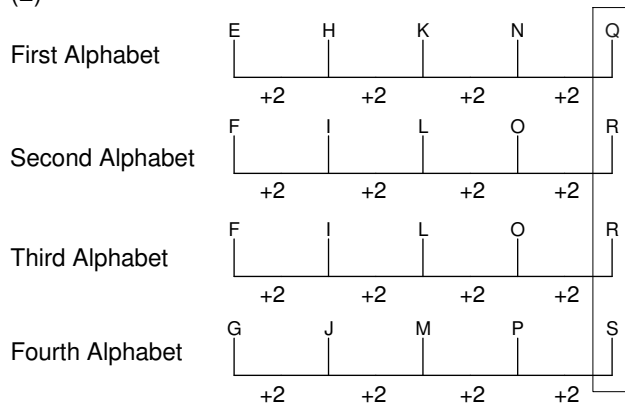


24. TGS, RIQ,, NMM
 (1) POK (2) PKO (3) PQR (4) POR (5) PKR

24. (2)



25. EFFG, HIIJ, KLLM, NOOP,
 (1) RSST (2) QRRS (3) QRST (4) QSST (5) PQQR
25. (2)



26. ABCD, BCDA, CDAB,
 (1) DABC (2) CBDA (3) DCBA (4) CABD (5) CDBA
26. (1)

Directions:

Questions (27 to 30) : In each of the following questions, five words are given. If they are arranged in alphabetical order as in a Dictionary, find out which word comes first. Indicate your answer as per the "Instructions."

27. (1) Summer (2) Sample (3) Skate (4) Serum (5) Sage
 27. (5)
 Arranging the words in alphabetical order. We have sage, sample, serum, skate, summer
28. (1) Concern (2) Carrot (3) Cook (4) Camel (5) Cow
 28. (4)
 Arranging the words in alphabetical order. We have Camel, Carrot, Concern, Cook, Cow
29. (1) Dirt (2) Discount (3) Drug (4) Dummy (5) Dozen
 29. (1)
 Arranging the words in alphabetical order. We have Dirt, Discount, Dozen, Drug, Dummy
30. (1) Vase (2) Vessel (3) Urn (4) Union (5) Wage
 30. (4)
 Arranging the words in alphabetical order. We have Union, urn, vase, vessel, wage

Directions :

Questions (31 to 40): In each of the following questions, five words are given. Four of them are alike in some way. One is different from them. Identify it and indicate as per "Instructions".

31. (1) Hands (2) Legs (3) Fingers (4) Toes (5) Abdomen
 31. (5)
 Except (5) all are limbs
32. (1) Bharat (2) Bihar (3) Bengal (4) Karnataka (5) Kerala
 32. (1)
 Except (1) all are states
33. (1) Lawyer (2) Lecturer (3) Doctor (4) Judge (5) Preacher
 33. (5)
 Except (5) all are professions
34. (1) Russia (2) Sweden (3) Ethiopia (4) Spain (5) Finland
 34. (3)
 Except (3) all are European countries
35. (1) Lion (2) Tiger (3) Elephant (4) Jackal (5) Leopard
 35. (3)
 Except (3) all are flesh eating animals
36. (1) Orange (2) Honey (3) Apple (4) Lemon (5) Melon
 36. (2)
 Except (2) all are fruits
37. (1) Heart (2) Liver (3) Lungs (4) Eyes (5) Kidney
 37. (4)
 Except (4) all are inner organs

38. (1) Chair (2) Pen (3) Pencil (4) Paper (5) File
 38. (1)
 Except (1) all are stationary objects
 39. (1) Kho-Kho (2) Football (3) Volleyball (4) Hockey (5) Tennis
 39. (1)
 Except (1) all are uses balls
 40. (1) Earth (2) Jupiter (3) Sun (4) Saturn (5) Venus
 40. (3)
 Except (3) all are planets

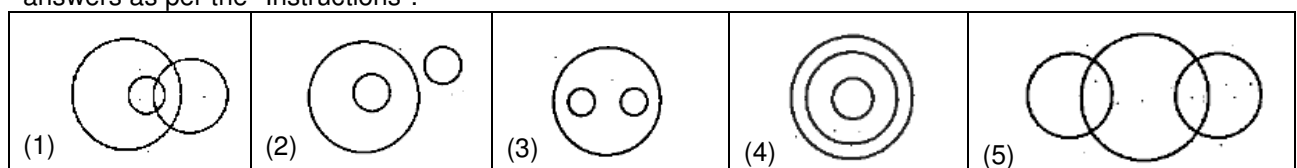
Directions:

Questions (41 to 45) In these questions, there is a certain relationship between two given words on one side of :: and one word is given on another side of ::, the other word is to be found out from the given five alternatives so that the relationship is the same as for the other pair. Identify correct answer and indicate it as per the "Instructions."

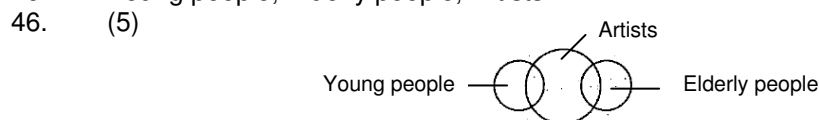
41. Bengaluru : Karnataka :: Kohima : ?
 (1) Manipur (2) Meghalaya (3) Mizoram (4) Sikkim (5) Nagaland
 41. (5)
 Bengaluru is the capital of Karnataka. Similarly Kohima is the capital of Nagaland.
 42. London : UK :: Bangkok : ?
 (1) South Korea (2) North Korea (3) Thailand (4) Malaysia (5) Laos
 42. (3)
 London is the capital of UK, similarly Bangkok is the capital of Thailand
 43. Hockey : Stick :: Tennis : ?
 (1) Bat (2) Racket (3) Ball (4) Court (5) Player
 43. (2)
 In hockey, ball is hit with a stick, similarly in Tennis ball is hit with a Racket
 44. Oxygen : Heart :: Fuel : ?
 (1) Car (2) Engine (3) Truck (4) Bike (5) Plane
 44. (2)
 Oxygen is processed by the heart, similarly fuel is processed by engine
 45. Orange : Fruit :: Spinach : ?
 (1) Vegetable (2) Root (3) Bush (4) Flower (5) Branch
 45. (1)
 Orange is fruit while spinach is vegetable

Directions:

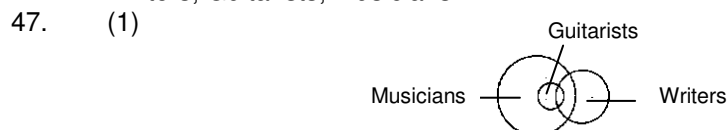
Questions (46 to 51) are based on the following diagrams. Study them carefully and indicate correct answers as per the "Instructions".



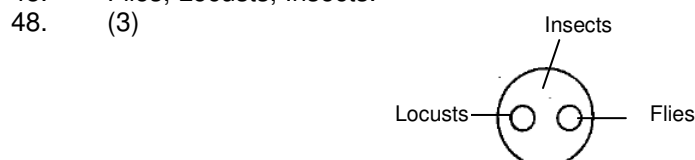
46. Young people, Elderly people, Artists.



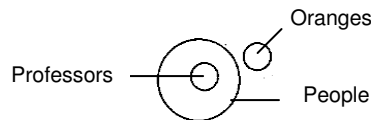
47. Writers, Guitarists, Musicians.



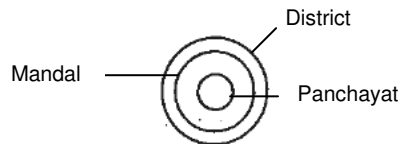
48. Flies, Locusts, Insects.



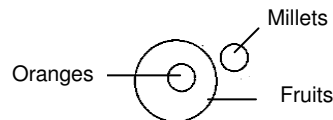
49. People, Professors, Oranges.
49. (2)



50. District, Mandal, Panchayat.
50. (4)

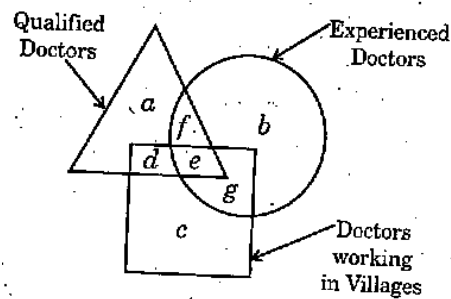


51. Fruits, Oranges, Millets
51. (2)



Directions:

Questions (52 to 56) : With the help of the given diagram, answer the following questions making the right choice from the given alternatives. Indicate the answer as per the "Instructions"



52. Qualified and experienced doctors working in villages are represented by the letter
(1) a (2) f (3) e (4) d (5) g
52. (3)
53. Qualified and experienced doctors working outside of villages are represented by
(1) d (2) e (3) f (4) c (5) b
53. (3)
54. Experienced but not qualified doctors working in villages are represented by
(1) g (2) c (3) b (4) d (5) f
54. (1)
55. Doctors who are neither qualified nor experienced but working in villages are represented by
(1) c (2) g (3) d (4) e (5) b
55. (1)
56. Qualified but not experienced doctors working outside of villages are represented by
(1) f (2) e (3) d (4) b (5) a
56. (5)

Directions:

Questions (57 to 61) : If in a language (say English), A is coded as 1, B is coded as 2 and so on, how are the following letters groups are coded in that language?

57. FHC1
(1) 6389 (2) 8369 (3) 6893 (4) 8936 (5) 6839
57. (5)
58. GADBH
(1) 71248 (2) 81248 (3) 71428 (4) 81428 (5) 82419
58. (3)
59. HBD FE
(1) 82654 (2) 84265 (3) 82465 (4) 86426 (5) 84626
59. (3)
60. GCEAI
(1) 72519 (2) 73519 (3) 73591 (4) 75391 (5) 71539
60. (2)

61. IHGFED
 (1) 987651 (2) 978562 (3) 897654 (4) 897645 (5) 987654
 61. (5)

Directions:

Questions (62 to 66) : If in a language, RIDGE is coded as 43567 and NAME is coded as 8217, how are the following words coded ? Indicate the answer as per "Instructions".

62. DANGER
 (1) 528764 (2) 528746 (3) 527846 (4) 526874 (5) 528674
 62. (5)
 R I D G E is coded as 4 3 5 6 7
 N A M E is coded as 8 2 1 7
 i.e R - 5, I - 3, D - 5, G - 6, E - 7; N - 8, A - 2, M - 1, E - 7
63. MANNER
 (1) 127884 (2) 127784 (3) 128784 (4) 128874 (5) 218874
 63. (4)
64. RANGER
 (1) 428674 (2) 428764 (3) 428874 (4) 448672 (5) 426874
 64. (1)
65. IMAGE
 (1) 32167 (2) 31267 (3) 32176 (4) 32267 (5) 31266
 65. (2)
66. DAMAGE
 (1) 522167 (2) 521267 (3) 521276 (4) 512267 (5) 512276
 66. (2)

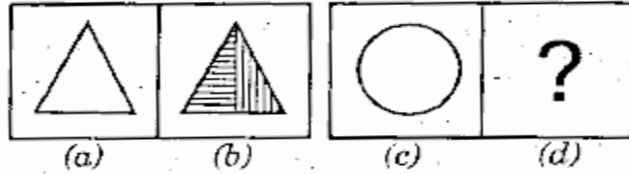
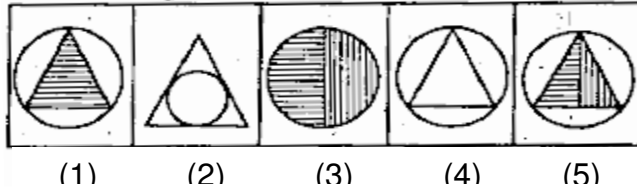
Directions:

Questions (67 to 75) are based on simple arithmetic principles, Find the right answer from among the alternatives and indicate it as per the "Instructions".

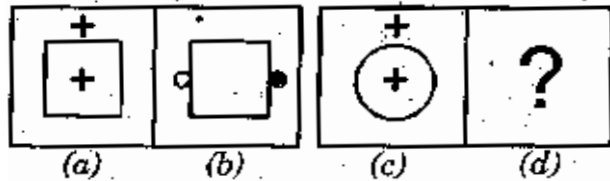
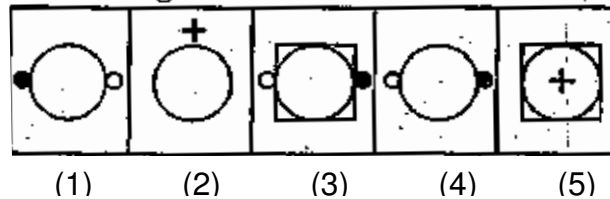
67. $(250 \times 7) - 36 = ?$
 (1) 1718 (2) 1736 (3) 1714 (4) 1750 (5) 1724
 67. (3)
68. $24x - 20 = 105 - x; x = ?$
 (1) 2 (2) 1 (3) 4 (4) 3 (5) 5
 68. (5)
69. $85 \div \dots = 8,500$
 (1) 5 (2) 1 (3) 0.01 (4) 0.001 (5) 5
 69. (3)
70. $40\% 80 - 80\% 40 = ?$
 (1) 0.0 (2) 4.0 (3) 8.0 (4) 30.0 (5) 32.0
 70. (1)
71. $50.9 - 7.5 + 1.6 =$
 (1) 40.0 (2) 35.0 (3) 36.0 (4) 45.0 (5) 44.5
 71. (4)
72. $(44 \div 1000) + 0.006 = ?$
 (1) 0.44 (2) 0.05 (3) 0.005 (4) 0.045 (5) 0.046
 72. (2)
73. $(7)^3 - 33 = ?$
 (1) 300 (2) 305 (3) 320 (4) 330 (5) 310
 73. (5)
74. $\frac{26}{4} + \frac{14}{3} = ?$
 (1) 11.0 (2) $10\frac{1}{6}$ (3) $11\frac{1}{6}$ (4) $12\frac{1}{5}$ (5) $11\frac{2}{3}$
 74. (3)
75. $5678 + 4321 = ?$
 (1) 9999 (2) 9899 (3) 9900 (4) 9990 (5) 9099
 75. (1)

Directions:

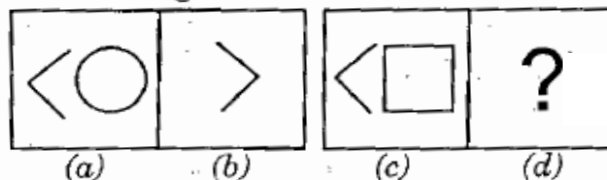
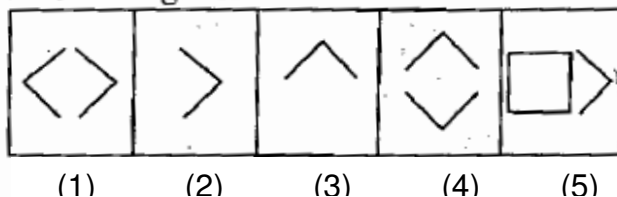
Questions (76 to 80) : Each question has four problem figures 'a', 'b', 'c' and 'd'. Figure 'd' has only a question mark '?'. Figure 'b' bears certain relationship to 'a'. Similarly one of the answer figures bears similar relationship to 'c'. Find this out and indicate it as per the "Instructions".

76.**Problem Figures****Answer Figures**

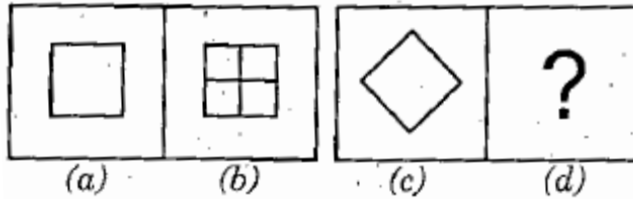
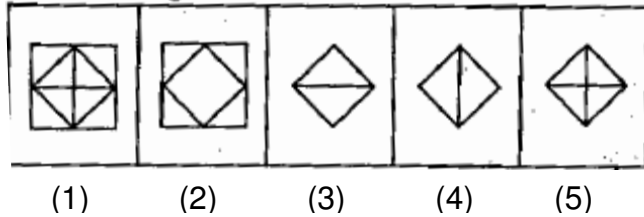
76. (3)

77.**Problem Figures****Answer Figures**

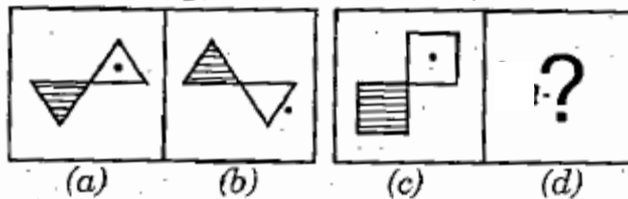
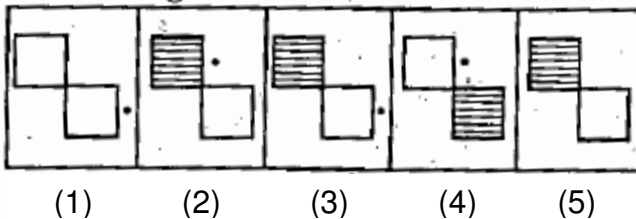
77. (4)

78.**Problem Figures****Answer Figures**

78. (2)

79.*Problem Figures**Answer Figures*

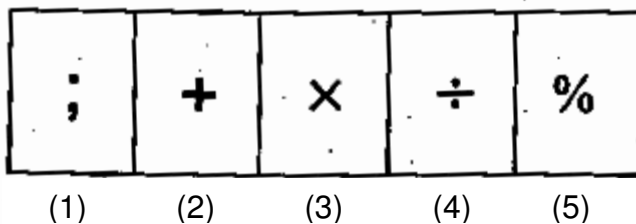
79. (5)

80.*Problem Figures**Answer Figures*

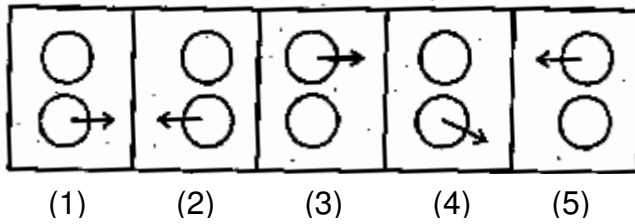
80. (3)

Directions:

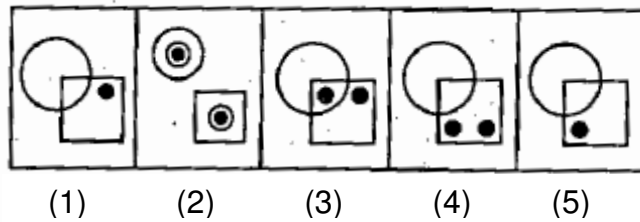
Questions (81 to 85) : In these questions, there are five figures. Four of them are similar with some common characteristic underlying them. Find out the figure that does not belong to the group. Indicate your answer as per the "Instructions".

81.

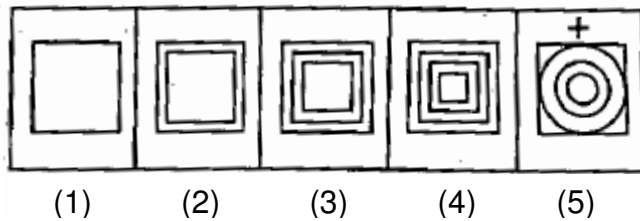
81. (1)
Except (1) all others are algebraic operators.

82.

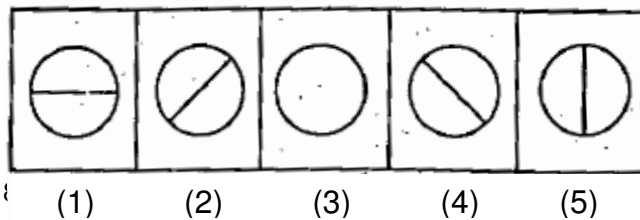
82. (4)
Except (4) in all other figures arrow either showing left or right.

83.

83. (2)

84.

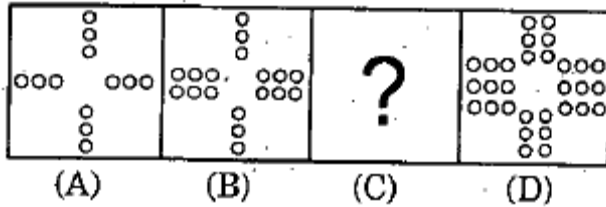
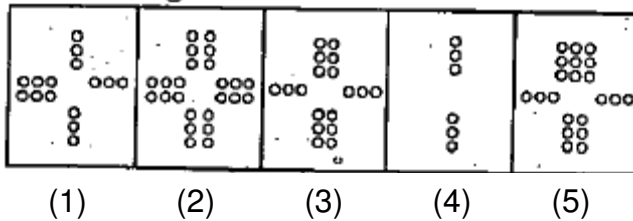
84. (5)
Except (5) all other figures having only squares.

85.

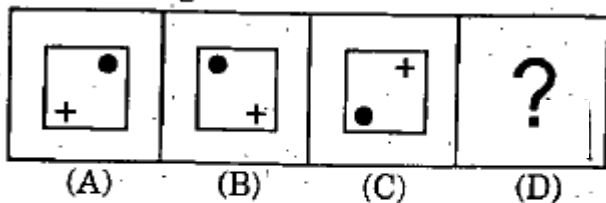
85. (3)
Except (3) all other circles having line passing through the centre.

Directions:

Questions (86 to 90) : In these questions, there are four problem figures 'A', 'B', 'C' and 'D'. One of them is, however, missing. You have to select one figure from the five answer figures, (1), (2), (3), (4) and (5) such that the series is completed. Indicate your answer as per the "Instructions".

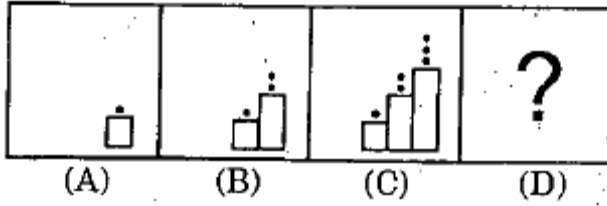
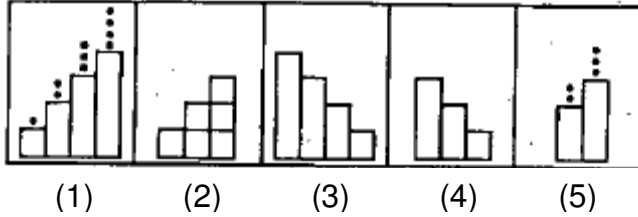
86.**Problem Figures****Answer Figures**

86. (2)

87.**Problem Figures****Answer Figures**

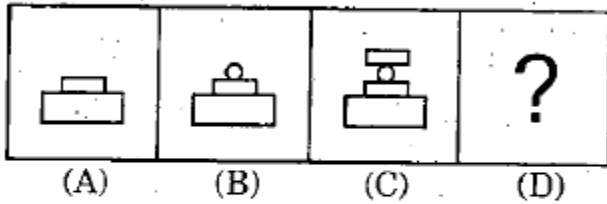
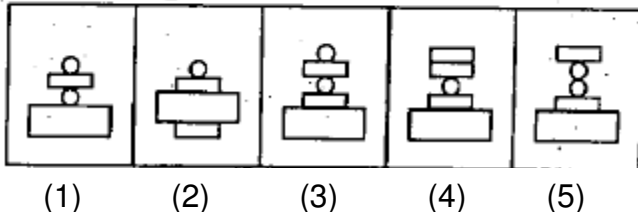
87. (4)

88.

Problem Figures*Answer Figures*

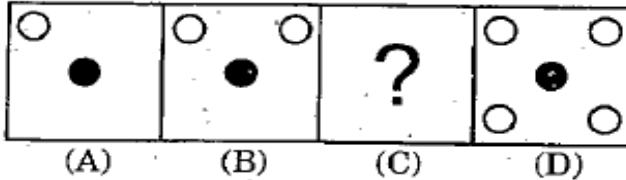
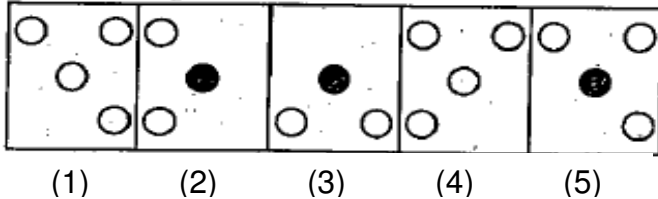
88. (1)

89.

Problem Figures*Answer Figures*

89. (3)

90.

Problem Figures*Answer Figures*

90. (5)