

Roll No.

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## झारखण्ड अधिविद्य परिषद्, राँची, झारखण्ड

राष्ट्रीय प्रतिभा खोज परीक्षा (Stage-I) 2019-20

PAPER - I

बौद्धिक योग्यता परीक्षा

समय : 120 मिनट

पूर्णांक : 100

दृष्टि बाधित परीक्षार्थियों के लिए समय : 150 मिनट

परीक्षार्थियों के लिए निर्देश

प्रश्नों के उत्तर देने के पहले निम्नलिखित निर्देशों को ध्यान से पढ़िए। उत्तर एक अलग ओ.एम.आर. उत्तर-पत्रक पर देने हैं।

1. अपना रोल नम्बर, जैसा कि आपके प्रवेश-पत्र में दिया गया है, स्पष्ट (एक Box में केवल एक अंक) लिखिए। यह ध्यान रखें कि कोई Box रिक्त न रह जाए, यहाँ तक कि आपके रोल नम्बर में आने वाले शून्य के अंक भी इस पुस्तिका तथा ओ.एम.आर. उत्तर-पत्रक पर सही Box में स्थानांतरित किए जाएँ। उदाहरण के लिए एक विद्यार्थी जो राँची केन्द्र से जिसका रोल नं. 21198899999 है, इस प्रकार Box में प्रविष्टियाँ करेगा :

Roll No.

2	1	1	9	8	8	9	9	9	9
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2. इस प्रश्न पुस्तिका में 100 बहुविकल्पीय प्रश्न हैं।
3. सभी प्रश्नों में से प्रत्येक के लिए 1 अंक निर्धारित है।
4. प्रश्न पुस्तिका के अन्त में रफ (Rough) कार्य के लिए एक खाली पृष्ठ दिया गया है।
5. याद रखिए कि आपको अपने उत्तरों के चिह्न एक अलग ओ.एम.आर. उत्तर-पत्रक पर दिए गए निर्देशों के अनुसार लगाने हैं।
6. प्रत्येक प्रश्न का उत्तर ओ.एम.आर. उत्तर-पत्रक पर उसी प्रश्न के सामने दिए गए विकल्पों में से सबसे उपयुक्त विकल्प वाला गोला को सिर्फ नीले या काले बॉल पेन से ही काला करना है। पेंसिल का प्रयोग वर्जित है।
7. अनुवादित विवरण में अन्तर से उठे किसी भी विवाद की स्थिति में, प्रश्न पत्र के अंग्रेजी विवरण को निर्णायक माना जाएगा।

नोट : पुस्तिका में रोल नम्बर लिखने के अतिरिक्त कहीं कुछ नहीं लिखिए।

## MENTAL ABILITY TEST

1. Qutb Minar: Delhi: : Rock Garden: ?  
(A) Kolkata (B) Chennai  
(C) Chandigarh (D) Bengaluru
2. If in a code CLOUD is written as DMPVE, then in the same code how SIGHT will be written?  
(A) SGHJV (B) UGHHT  
(C) UHJFW (D) TJHIU

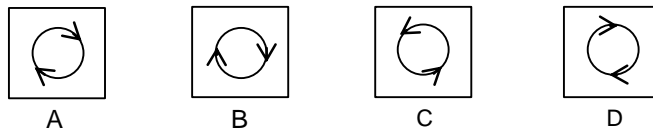
### **Paragraph for Q. No. 3-7**

Read the following information and answer the questions based on it:

- (I) A, B, C, D, E and F are six family members.
- (II) There is one Teacher, one Professor, one Engineer, two students and one Housewife.
- (III) There are two married couples in the family.
- (IV) A who is a Teacher is father of E.
- (V) F is a Student and mother of D.
- (VI) B is grandmother of D and is a Housewife.
- (VII) C is father of A and is an Engineer.
- (VIII) D is brother of E.

3. Which of the following statements is definitely true?  
(A) C is father of the Student (B) B is grandmother of Professor  
(C) F is the father of Professor (D) D is the brother of the professor
4. Which of the following is one of the pairs of married couples?  
(A) FB (B) FA  
(C) CF (D) FD
5. Who is the professor?  
(A) D (B) E  
(C) Either D or E (D) A's son
6. How many female members are there in the family?  
(A) Three only (B) Two only  
(C) Three (D) Two or three
7. How is D related to B?  
(A) Granddaughter (B) Grandson  
(C) Son (D) None of these
8. A man walks 2km to the east, turns left, walks 2 km and turns left and walks 2km. which direction is he facing now?  
(A) East (B) West  
(C) North (D) South
9. If UNDERSTAND is written as 1234567823 in a code language then in that language START will be written as  
(A) 56781 (B) 83243  
(C) 73652 (D) 67857

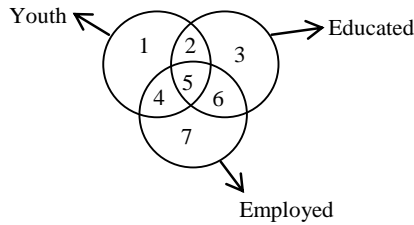
10. In this question, select the one figure which is different from the other three.



- (A) A (B) B  
(C) C (D) D

**Paragraph for Q. No. 11-13**

Study the following diagram.



11. Identify the region representing the youths who are employed, but not educated.  
(A) 4, 5, 6 (B) 4 only  
(C) 1, 4, 7 (D) 4, 7
12. Identify the region representing youths who are educated but not employed.  
(A) 2, 5, 4 (B) 2, 5, 6  
(C) 4, 5, 6 (D) 2 only
13. Identify the region representing youths who are educated and employed also  
(A) 6 only (B) 7 only  
(C) 5 only (D) none of these
14. If 'x' means 'sum', '-' means 'division', '+' means subtract and '·' means 'multiplication', then which of the following equation is true?  
(A)  $16 + 5 - 10 \times 4 \div 3 = 9$  (B)  $16 - 5 \times 10 \div 4 + 3 = 12$   
(C)  $16 + 5 \div 10 \times 4 - 3 = 9$  (D)  $16 \times 5 \div 10 + 4 - 3 = 9$

**Paragraph for Q. No. 15-16**

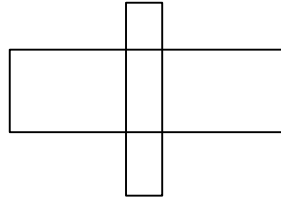
Identify the missing number in the following sequence:

[Hints: all are prime nos.]

15. 31, 37 ? 43, 47, 53  
(A) 39 (B) 40  
(C) 41 (D) 42
16. 2, 3, 6, 15, 42, ?  
(A) 84 (B) 123  
(C) 94 (D) 60

17. If BAT is coded as 283, CAT is coded as 383 and ARE is coded as 801, the code for BETTER is  
 (A) 123301 (B) 213310  
 (C) 213301 (D) 012334

18. How many rectangles are there in the following diagram?



- (A) 5 (B) 15  
 (C) 11 (D) 12

19. In any code language DEVIL is written as ABSFI, then how OTHER will be written in that language?

- (A) LRECO (B) LQEBO  
 (C) LWEBO (D) RWKHV

20. What will be in place of (?) ?  
 A, G, M, R, X, ?

- (A) A (B) B  
 (C) C (D) D

21. What will be in place of (?) ?  
 AT, CS, ER, GQ, ?

- (A) JP (B) IQ  
 (C) IP (D) JO

22. Crime: Punishment: :Good work: ?

- (A) Sin (B) Reward  
 (C) Good (D) Entertainment

23. import: Export: :Expenditure: ?

- (A) Revenue (B) Deficit  
 (C) Tax (D) Exchange

24. If in English alphabets first and twenty-sixth letters are a pair, second and twenty-fifth are a pair and so on, then which of the following is a like pair?

- (A) IP (B) GR  
 (C) CW (D) EV

25. Select the word which can be made by using the letters of the given word:

- MULTIPLICATION  
 (A) MUTUALY (B) LIMITATION  
 (C) APPLICABLE (D) NOTIFICATION

26. How many meaningful English words can be made by using each letter of the group of letters ACER only once?

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

27. Select the word from the alternative which cannot be made by using the letters of the given word.  
SUPERIORITY  
(A) PURSE (B) PURSUIT  
(C) PRIORITY (D) PURITY
28. If in any code language CAME is written as JZBF then, what will be written for CAKE in that language?  
(A) J BVF (B) FJVB  
(C) J VBF (D) FBVJ
29. In any code language CARE is written as BZQD then how LEMON will be written in that language?  
(A) GDEDO (B) GDDMO  
(C) OVNLM (D) KDLNM
30. In certain code CLOUD is written as DMPVE then how SIGHT will be written in that code?  
(A) SGHJV (B) UGHHT  
(C) UHJFW (D) TJHIU

For Q.31- 35 : Below are given some numbers with some letters. Study them and answer the questions:

5	2	6	3	0	1	8	7	4	9
P	D	N	L	G	K	H	J	B	A

31. 384029  
(A) LHBGDA (B) ADGBLH  
(C) PDNLHG (D) DCBANL
32. 422605  
(A) CLNDOPB (B) BDDNGP  
(C) PGNDBC (D) CBADLC
33. 3265401  
(A) OPNDCBA (B) LCDBDNO  
(C) LDNPBGK (D) KGBCDNC
34. 1003241  
(A) KGGDLBDK (B) CNDLBOK  
(C) BCDBAAC (D) KGGLDBK
35. 321567  
(A) LDKPNJ (B) JNPKDL  
(C) LKDNJP (D) PJKLDN
36. The way in which 'Whale' is related to 'Mammal' in the same way to which the 'Crocodile' will be related?  
(A) Amphibian (B) Aquatic  
(C) Mammal (D) Bird
37. The relation that exists between China and Beijing, the same relation exists between Japan and which of the following .  
(A) Moscow (B) Rome  
(C) Berlin (D) Tokyo

38. The relation which exists between pasteurization and Louis Pasteur the same relation exists between Aeroplane and which of the following?  
 (A) G. Marcony (B) J.L Baird  
 (C) Wriighth brothers (D) Brecket
39. The relation exists between DSO and GVR the same relation exists between NDV and which of the following .  
 (A) YGQ (B) QYG  
 (C) YQG (D) QGY
40. The relation that exists between 'Canada' and 'Maple leaves' the same relation exists between 'Sri Lanka' and which of the following?  
 (A) Lion and Sword (B) Olive leaves  
 (C) Eagle (D) Rose flower

**Paragraph for Q. No. 41-43:**

Answer the following questions on the basis of the information given

- (A) The meaning of  $P+Q$  is – P is the brother of Q  
 (B) The meaning of  $P-Q$  is – P is the mother of Q  
 (C) The meaning of  $P \times Q$  is – P is the sister of Q
41. Which of the following means that M is the maternal uncle of R?  
 (A)  $M + K - R$  (B)  $M - R + K$   
 (C)  $M + K \times Q$  (D)  $M - K + P$
42. What conclusion do you extract from  $M + N - Q \times R$  ?  
 (A) R is the sister of N  
 (B) M is the maternal uncle of Q  
 (C) R is the husband of N  
 (D) R is the brother of Q
43. P is the brother of Q, R is the sister of Q and S is the sister of R, then how is Q related to R?  
 (A) Sister (B) Brother or sister  
 (C) Brother (D) Father
44. Indicating to a picture Aparna said " He is the only son of the father of the brother of my sister" how is Aparna related to that person?  
 (A) Maternal uncle (B) Father  
 (C) Grandfather (D) Brother
45. Chhaya is telling to Anuradha " The father of your daughter is the son of my maternal grandfather" How is Chhaya related to the husband of Anuradha?  
 (A) Sister (B) Mother  
 (C) Aunt (D) Niece
46. A lady walked 15 km in the eastern direction, then walked 4km towards north and again walked 12 km towards west, How far is he from her starting place ?  
 (A) 31 km (B) 5 km  
 (C) 19 km (D) 27 km

47. If a clock is kept in such a way that its figure of 12 comes towards east, then in which direction will be the figure of 9?  
 (A) South (B) West  
 (C) North (D) East
48. In the morning I went for a walk in the garden. I was standing in a place and wanted to see the sun. For this purpose I turned  $90^\circ$  anticlockwise. But I could not see the sun. So I turned  $270^\circ$  clockwise. This time I could see the sun. In which direction I was facing at the first  
 (A) North-west (B) North  
 (C) South- East (D) West
49. In a morning just after the sunrise A and B was talking between each other face to face. If the shadow of B fell just on the left of A, then just opposite of which direction was the face of A?  
 (A) North- East (B) North  
 (C) West (D) South
50. In the evening just before sunset, Ram and Mohan were standing in a courtyard and talking between each other. If the shadow of Mohan falls is just on the left of Ram, then in which direction is the face of Ram?  
 (A) East (B) West  
 (C) South (D) North
51. Kiran, Suman, Vidya, Naina and Kamala are five friends, Naina is younger than Kamala, Suman, is younger than Vidya and Vidya is younger than Kiran. If Suman is elder than Kamala then who will be in the middle in the order of their ages?  
 (A) Anjali (B) Khushbu  
 (C) Rupa (D) Garima
52. Garima, Rupa, Anjali and Khushbu are made to stand in ascending order of their ages. If Rupa is elder than Khushbhu, Garima is younger than Anjali and elder than Rupa, then who is the youngest?  
 (A) Anjali (B) Khusbhu  
 (C) Rupa (D) Garima
53. In an examination Suman has got equal marks as Kavita. Meena got more marks than Geeta, but her marks was less than Suman. Who got the least marks?  
 (A) Suman (B) Meena  
 (C) Geeta (D) Kavita
54. Gopal is elder than Mohan but younger than Ram. Mohan is elder than Sohan but younger than Ram. Who is the eldest?  
 (A) Mohan (B) Sohan  
 (C) Ram (D) Gopal
55. Sourav is elder than Neeraj, but younger than Vinod. Manu is elder than Vinod, but younger than Shivam. Who is the eldest?  
 (A) Sourav (B) Neeraj  
 (C) Shivam (D) Manu

**Paragraph for Q. No. 56-60**

Six persons A, B, C, D, E and F are sitting in a circle facing the centre. A is in the middle of B and C, but E and C are face to face to F. D is second in the left of E.

56. Who is second person sitting in the right of A?  
 (A) D (B) E  
 (C) B (D) F
57. Who is sitting just on the left of D?  
 (A) B (B) A  
 (C) C (D) F
58. Who is sitting just in front of F?  
 (A) C (B) B  
 (C) A (D) F
59. Who is sitting just in front of E?  
 (A) C (B) D  
 (C) B (D) A
60. Who is sitting just in front of D?  
 (A) C (B) A  
 (C) F (D) E

**Paragraph for Q. No. 61-64**

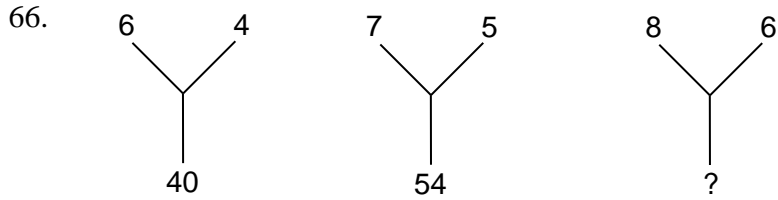
Six books are kept one above another. Biology book is just under the Physics book. Chemistry book is in between Hindi and Geography books. Anthropology book is not on the top. Biology book is at the bottom and Hindi book is on the top.

61. Which book is in second place from the top?  
 (A) Chemistry (B) Anthropology  
 (C) Geography (D) Biology
62. Which book is fourth from the bottom?  
 (A) Hindi (B) Geography  
 (C) Anthropology (D) Chemistry
63. Which book is third from the top?  
 (A) Geography (B) Anthropology  
 (C) Physics (D) Biology
64. Which book is in between Chemistry and Anthropology?  
 (A) Physics (B) Geography  
 (C) Biology (D) Hindi
65. Which of the following words will come third in the English dictionary?  
 (A) Reconcile (B) Reconstruct  
 (C) Reconsider (D) Reconnoitre

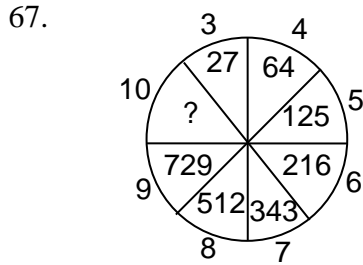


**Paragraph for Q. No. 66-70**

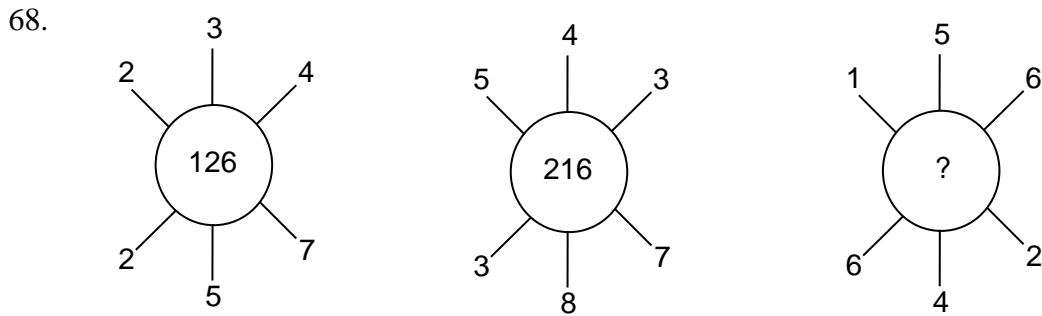
What will be in the place of (/)



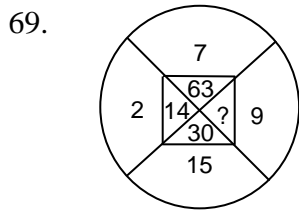
- (A) 70 (B) 75  
(C) 80 (D) 85



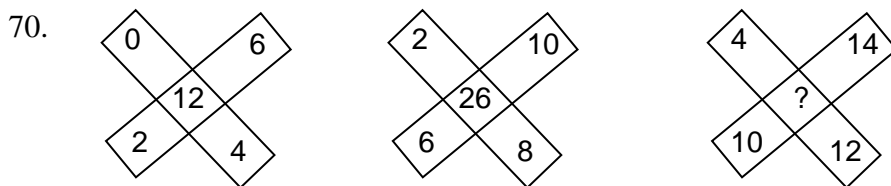
- (A) 1000 (B) 2000  
(C) 3000 (D) 4000



- (A) 142 (B) 242  
(C) 144 (D) 216



- (A) 33 (B) 145  
(C) 135 (D) 18



- (A) 36 (B) 38  
(C) 40 (D) 48

**Paragraph for Q. No. 71-75**

In the following questions two statements and four conclusions I, II, III and IV have been given. According to the logic you have to decide on the basis of the given two statements that which conclusion is correct :

71. Statements : A Some students are children.  
B All children are girls.  
Conclusions: I. All students are girls.  
II. Some girls are students.  
III. Some girls are children.  
IV. All children are students.  
(A) Only conclusions II is correct  
(B) Conclusions I, II and III are correct  
(C) All conclusions are correct  
(D) Conclusions II and III are correct.

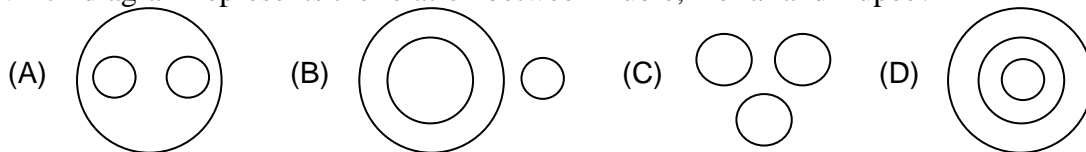
72. Statements : A. All papers are pens.  
B. All pens are wet.  
Conclusions : I. Some pens are papers.  
II. No pen is paper.  
III. Some wet are pens.  
IV. All wets are papers.  
(A) Only conclusion I is correct  
(B) Conclusion I or II is correct  
(C) Conclusions I and III are correct  
(D) Conclusion III or IV is correct

73. Statements : A. Some windows are doors.  
B. All doors are handles.  
Conclusions : I. Some windows are handles.  
II. All windows are handles.  
III. Some cats are handles.  
IV. All cats are handles.  
(A) All conclusions are correct.  
(B) Conclusions II and IV are correct.  
(C) No conclusion is correct.  
(D) Conclusions I and III are correct.

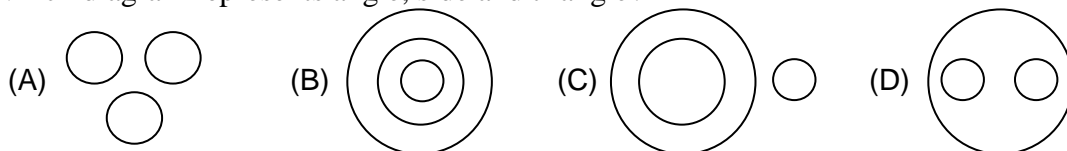
74. Statements : A. Some black are yellow.  
B. No yellow is not white.  
Conclusions : I. Some yellow are black.  
II. Some white are black.  
III. Some white are black.  
IV. All white are black.  
(A) Only conclusion I is correct.  
(B) Conclusions II & III are correct.  
(C) Conclusions I & III are correct.  
(D) Only conclusion III is correct.

75. Statements : A. Some pens are pencils.  
 B. Some pencils are papers.  
 Conclusions : I. All papers are pens.  
 II. Some papers are pens.  
 (A) Only conclusion I is correct.  
 (B) Only conclusion II is correct.  
 (C) Both conclusions I & II are correct.  
 (D) Neither conclusion I nor conclusions II is correct.

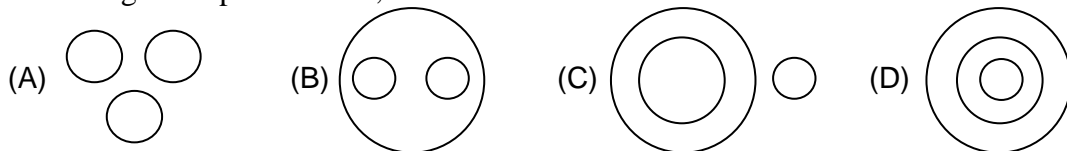
76. Which diagram represents the relation between Ruble, Dollar and Rupee?



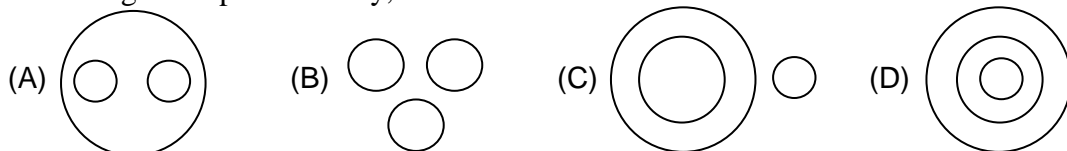
77. Which diagram represents angle, side and triangle?



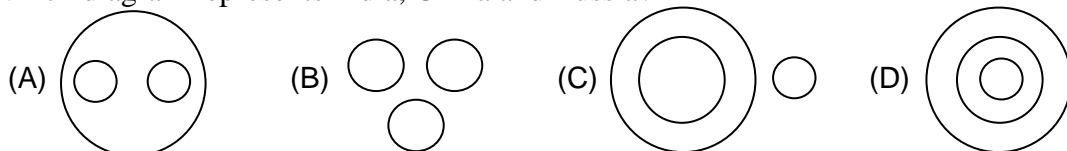
78. Which diagram represents TV, Freeze and Cooler?



79. Which diagram represents Boy, Girl and Man?

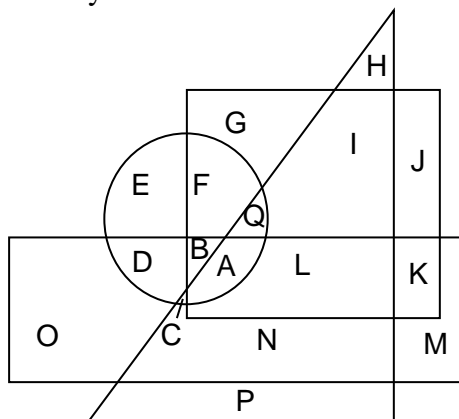


80. Which diagram represents India, China and Russia?



**Paragraph for Q. No. 81-85**

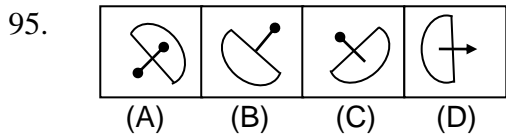
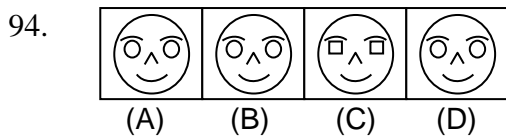
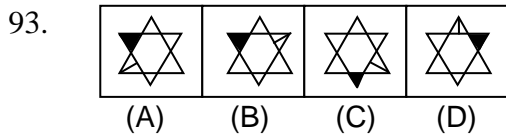
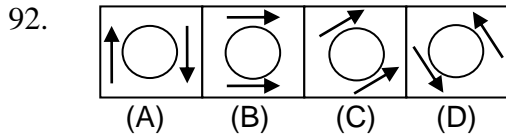
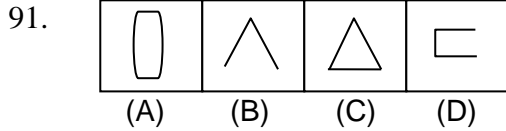
Question Nos. 81 to 85 are based on the following diagram in which four figures (one circle, one square, one triangle and one rectangle) are overlapping each other. Different regions of the diagram are marked with letters A to Q. Read each question carefully and choose the correct alternatives.



81. In the given diagram which letter is inside the square and triangle, but outside the rectangle and circle?  
 (A) G (B) I  
 (C) L (D) F
82. Which letter is outside the square and triangle, but inside the rectangle and circle?  
 (A) D (B) B  
 (C) C (D) A
83. Which letter will come inside the square, circle and rectangle, but not inside the triangle?  
 (A) E (B) D  
 (C) C (D) B
84. Which letter is inside of all the figures?  
 (A) C (B) B  
 (C) A (D) Q
85. Which letter is inside the rectangle, square and triangle, but outside the circle?  
 (A) B (B) C  
 (C) A (D) L
86. The director reached the conference hall for the meeting at 10 minutes earlier than 11:40 and found that his joint director who was 30 minutes late had reached 20 minutes earlier. What is the scheduled time of the meeting?  
 (A) 11:40 (B) 11:30  
 (C) 11:20 (D) 11:50
87. A candidate joined an examination in which he answered 108 questions. In the examination every wrong answer will get negative  $\frac{1}{3}$ rd mark and every correct answer will get 1 mark. If the candidate has got zero then how many wrong answers he has given?  
 (A) 27 (B) 62  
 (C) 54 (D) 81
88. On my birthday my father distributed Rs.280 in such a way that each girl gets Rs.20 and each boy gets Rs.10. If the number of girls is 2 more than the boys then how many boys were there?  
 (A) 5 (B) 9  
 (C) 10 (D) 8
89. My mother's age is double of my sister. My father is 20 years elder than me. When my sister was born I was 5 years old. If my sister is at present 17 years old, then what is the difference of ages of my father and mother?  
 (A) 5 years (B) 6 years  
 (C) 7 years (D) 8 years
90. B's age is 4 years less than A. D's age is 4 years less than C, but  $\frac{1}{4}$ th of A. If C's age is 8 years then B's age is how much time(s) of D?  
 (A) 1 (B) 2  
 (C) 3 (D)  $\frac{1}{2}$

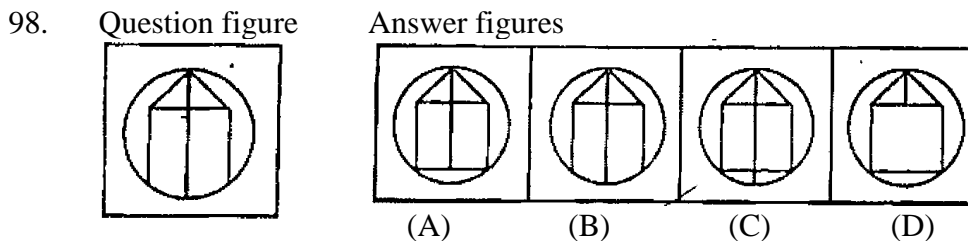
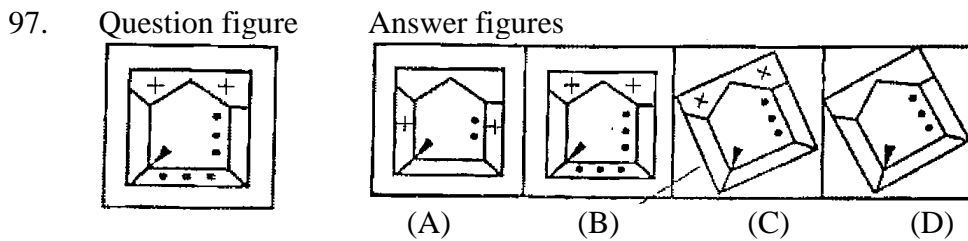
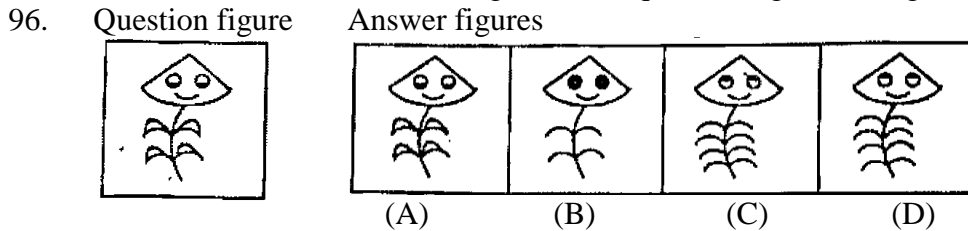
**Paragraph for Q. No. 91-95**

In each question there are four figures 1, 2, 3 and 4. Among these four figures three are alike and one is different. Select the different figure.

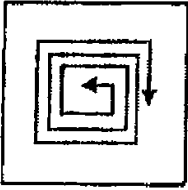


**Paragraph for Q. No. 96-100**

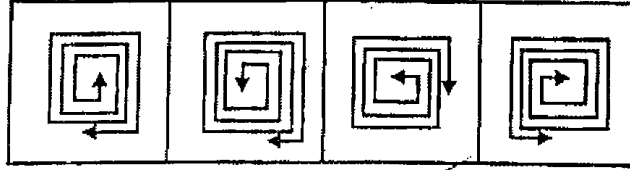
In the left of each question there is one question figure and to the right there are four answer figures 1, 2, 3 and 4. You have to select the similar figure to the question figure among the four answer figures.



99. Question figure



Answer figures



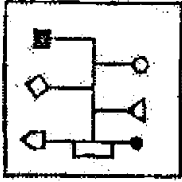
(A)

(B)

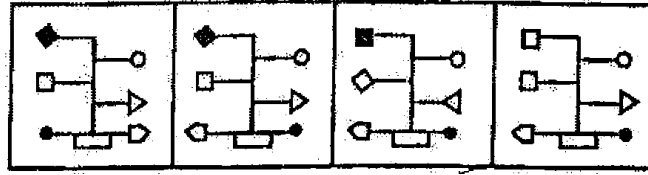
(C)

(D)

100. Question figure



Answer figures



(A)

(B)

(C)

(D)