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OPSC ASO

**Previous Year Paper
2015**

Reasoning & Mathematics



DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO

T. B. C. : ASG – 4/15

Test Booklet Series

Serial No.

152949
TEST BOOKLET
RECRUITMENT OF A. S. O.



TEST OF REASONING AND MENTAL ABILITY

Time Allowed : 1 (one) Hour

Maximum Marks : 100

: INSTRUCTIONS TO CANDIDATES :

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET DOES NOT HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET OF THE SAME SERIES ISSUED TO YOU.
2. Please note that it is the candidate's responsibility to encode and fill in the Roll Number and Test Booklet Series A, B, C or D carefully using BALL POINT PEN (with BLUE OR BLACK INK) and without any omission or discrepancy at the appropriate places in the OMR Answer Sheet. Any omission/discrepancy will render the Answer Sheet liable for rejection.
3. You have to enter your Roll No. on the Test Booklet in the Box provided alongside. DO NOT write anything else on the Test Booklet.
4. This Test Booklet contains 50 items (questions). Each item (question) comprises four responses (answers). You will select the correct response (answer) which you want to mark (darken) on the Answer Sheet. In case, you feel that there is more than one correct response (answer), mark (darken) the response (answer) which you consider the best. In any case, choose **ONLY ONE** response (answer) for each item (question).
5. You have to mark (darken) all your responses (answers) **ONLY** on the separate Answer Sheet provided, by using **BALL POINT PEN (with BLUE OR BLACK INK)**. See instructions in the Answer Sheet.
6. (i) All items (questions) carry equal marks. All items (questions) are compulsory. Your total marks will depend only on the number of correct responses (answers) marked by you in the Answer Sheet.
(ii) There will be no negative marking for wrong response (answer).
(iii) If candidates give more than one response (answer), it will be treated as a wrong response (answer) even if one of the given responses (answers) happens to be correct.
7. Before you proceed to mark (darken) in the Answer Sheet the responses (answers) to various items (questions) in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per the instructions in your Admission Certificate.
8. After you have completed filling in all your responses (answers) on the Answer Sheet and after conclusion of the examination, you should hand over to the Invigilator the Answer Sheet. You are permitted to take with you the candidate's copy/second page of the Answer Sheet along with the Test Booklet, after completion of the examination, for your reference.
9. Sheets for rough work are appended in the Test Booklet at the end.

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SEAL

Direction (Q. Nos. 1 & 2) : Choose a correct sequence of ascending order of magnitude.

1. $2^{12}, 3^8, 4^7, 10^3$:

(A) $2^{12}, 3^8, 10^3, 4^7$

(B) $10^3, 2^{12}, 4^7, 3^8$

(C) $10^3, 2^{12}, 3^8, 4^7$

(D) $10^3, 4^7, 2^{12}, 3^8$

2. Trillion, Million, Billion, Thousand :

(A) Trillion, Thousand, Billion, Million

(B) Trillion, Million, Billion, Thousand

(C) Thousand, Billion, Million, Trillion

(D) Thousand, Million, Billion, Trillion

Direction (Q. Nos. 3 & 4) : In each of the following number series, a wrong number is given. Find out the wrong number.

3. 2, 6, 12, 18, 30, 42 :

(A) 6

(B) 12

(C) 18

(D) 30

4. 2, 3, 5, 7, 9, 11, 13, 17, 19 :

(A) 2

(B) 9

(C) 11

(D) 19

5. In the series :

861238742157862171413286

how many pairs of successive numbers have a difference of 2 each ?

(A) 3

(B) 4

(C) 5

(D) 6

6. Lata ranked eighth from the top and thirty ninth from the bottom in a class.

How many students are there in a class ?

(A) 45

(B) 46

(C) 47

(D) 48

Direction (Q. Nos. 7 to 9) : Which of these jumbled words is the odd one out ?

7. (A) FARFIGE
(B) CWOR
(C) CIENCKH
(D) CHTOSIR
8. (A) ART
(B) TAC
(C) GOD
(D) TAH
9. (A) EHOSU
(B) EMEPLT
(C) QUOMSE
(D) HURHCC

Direction (Q. Nos. 10 & 11) : Six persons A, B, C, D, E, F are sitting around a circular table at equal distance from each other. A is sitting two place right of B who is exactly opposite to C. C is on immediately to the left of D, who is exactly opposite to E.

10. Who is the only person sitting between A and B ?

- (A) F
(B) E
(C) D
(D) C

11. The angle subtended by C and F at the centre of the table is :

- (A) 60°
(B) 120°
(C) 90°
(D) 180°

12. Lata is twice as old as Gita.

Three years ago, she was three times as old as Gita. How old Lata is now ?

- (A) 6 years
(B) 8 years
(C) 10 years
(D) 12 years

13. A man is facing north-west. He turns 90° in the clockwise direction and then 135° in the anticlockwise direction. Which direction is he facing now ?

- (A) North
- (B) South
- (C) East
- (D) West

14. How many such pairs of letters are there in the word 'ENTHUSIASTIC' each of which has as many letters between them in the word as there are between them in English alphabet ?

- (A) 3
- (B) 4
- (C) 5
- (D) None of the above

Direction (Q. Nos. 15 & 16) : Study the following arrangement carefully

and answer the questions given below.

I T # A J 7 B \$ D 2 K • E L 5 H P E %

15. How many such symbols are there in the above arrangement, each of which is immediately followed by a vowel and not immediately preceded by a number ?

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

16. How many such numbers are there in the above arrangement, each of which is immediately preceded by a letter and immediately followed by a symbol ?

- (A) None
- (B) One
- (C) Two
- (D) Three

Direction (Q. Nos. 17 & 18) : Each question below has a set of two statements. Each statement has three segments. Choose the alternative where the third segment in a statement can be logically deduced using both the preceding two segments.

17. (i) Some boys are tall ; all tall persons are smart ; some boys are smart.
 (ii) Some boys are tall ; some boys are smart ; boys are either tall or smart.
 (A) Only (i)
 (B) Only (ii)
 (C) Neither (i) nor (ii)
 (D) None of the above
18. (i) All coins are crows ; some crows are pens, no pen is coin.
 (ii) All coins are crows ; some crows are pens ; some coins are pens.
 (A) Only (i)

- (B) Only (ii)
 (C) Neither (i) nor (ii)
 (D) Both (i) and (ii)

Direction (Q. Nos. 19 & 20) : From a group of 5 Ministers A, B, C, D, E and 4 Officers L, M, N, O a team of 5 member is chosen under the following conditions.

- (i) C cannot go with O
 (ii) A and D have to be together
 (iii) D cannot go with L
 (iv) C and M have to be together
 (v) B and N have to be together
 (vi) B cannot go with E
19. If the team consists of 3 Officers, then the members of the team are :
 (A) LMNBC
 (B) MNOAD
 (C) LMNBD
 (D) LMOAE

20. If D is a member of the team and the team consists of 4 Ministers, then the other members of the team are :

- (A) ABCM
- (B) ACEN
- (C) ACEM
- (D) None of the above

Direction (Q. Nos. 21 to 25) : There is a certain relationship between the two words on the left hand side of the sign ::, which of the given alternatives is related to the third word in the same way as the second word is related to the first word ?

21. Potato : Stem :: Turnip : ?

- (A) Flower
- (B) Vegetable
- (C) Root
- (D) None of the above

22. Element : Argon :: Compound : ?

- (A) Copper
- (B) Water
- (C) Hydrogen
- (D) Neon

23. Resistance : Ohm :: Potential : ?

- (A) Ampere
- (B) Joule
- (C) Volts
- (D) Watts

24. Hostel : Warden :: Museum : ?

- (A) Archaeologist
- (B) Conductor
- (C) Curator
- (D) Servant

25. Cat : Kitten :: Lion : ?

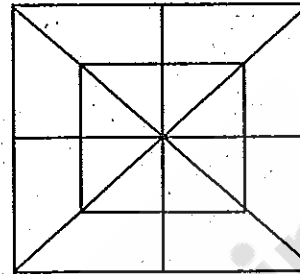
- (A) Cub
- (B) Calf
- (C) Pony
- (D) Lamb

26. In a correctly worked out multiplication problem below, each letter represents a different digit. What is the value of X ?

$$\begin{array}{r} X2Y \\ \times Y \\ \hline 212Y \end{array}$$

- (A) 3
(B) 4
(C) 5
(D) 6
27. In a certain language, if BHUBANESWAR is coded as CIVCBOFTXBS, how is CUTTACK coded ?
- (A) DWXXBDI
(B) DUUVBDL
(C) DVUUBDL
(D) BVUUBDL

Direction (Q. Nos. 28 to 30) : Refer to the figure below and answer the questions that follow.



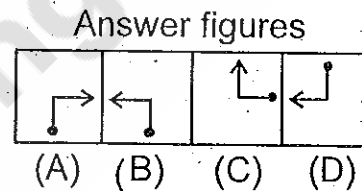
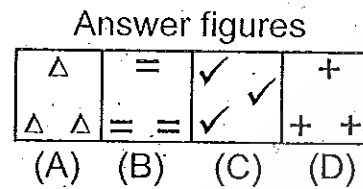
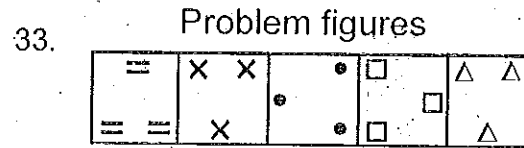
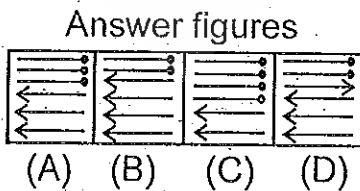
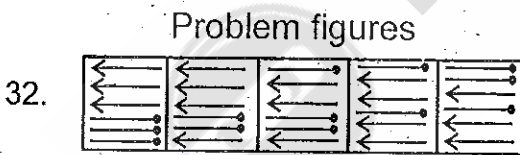
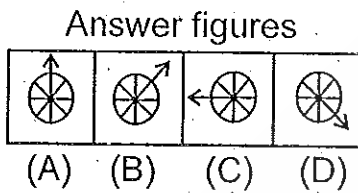
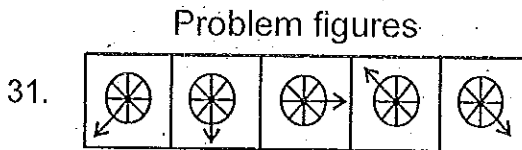
28. How many triangles are there in the given figure ?
- (A) 12
(B) 16
(C) 20
(D) 32
29. How many squares are there in the given figure ?
- (A) 6
(B) 8
(C) 10
(D) 12
30. Determine the number of straight lines in the figure :
- (A) 10

(B) 12

(C) 14

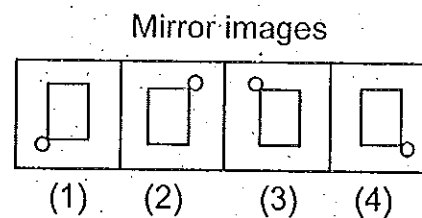
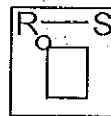
(D) 16

Direction (Q. Nos. 31 to 34) : In each of the questions given below which one of the four answer figures should come after the problem figures, if the sequence were continued ?

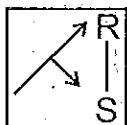


Direction (Q. Nos. 35 to 38) : Choose the correct mirror image of the problem figure when the mirror is placed in R-S position.

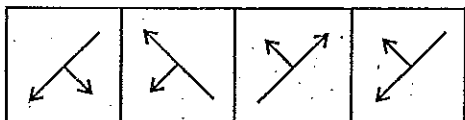
35. **Problem figure**



36. Problem figure



Mirror images

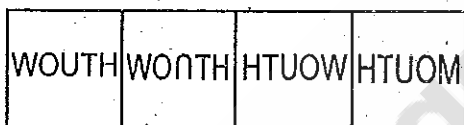


(A) (B) (C) (D)

37. Problem figure



Mirror images

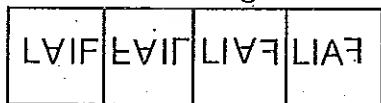


(A) (B) (C) (D)

38. Problem figure

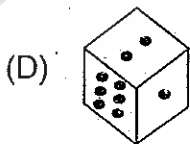
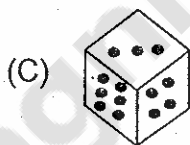
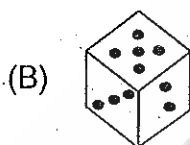
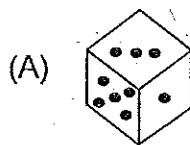


Mirror images

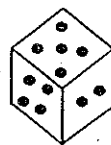
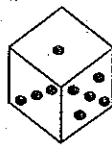


(A) (B) (C) (D)

39. The total number of dots on opposite faces of a die is always 7. Find the correct figure from the given alternatives.



40. Two positions of a die with 1 to 6 dots on its faces are shown below. How many dots are there on the face opposite the face having 2 dots ?



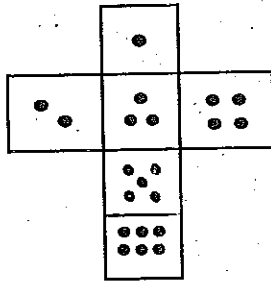
(A) 1

(B) 3

(C) 4

(D) 6

41. How many dots lie opposite the face having three dots, when the given figure is folded to form a cube?



(A) 2

(B) 4

(C) 5

(D) 6

Direction (Q. Nos. 42 to 45) : A cube is painted black on all six faces is cut into 27 small cubes of equal sizes.

42. How many small cubes have only one face painted?

(A) 4

(B) 6

(C) 8

(D) 12

43. How many small cubes have only two faces painted?

(A) 4

(B) 6

(C) 8

(D) 12

44. How many small cubes have only three faces painted?

(A) 2

(B) 4

(C) 6

(D) 8

45. How many small cubes do not have any of the faces painted?

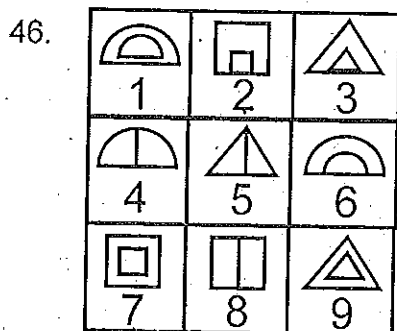
(A) 1

(B) 4

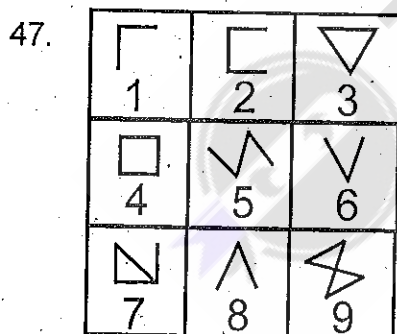
(C) 8

(D) None of the above

Direction (Q. Nos. 46 to 48) : All nine figures of each question are numbered from 1 to 9. Arrange them into 3 groups according to their common properties.

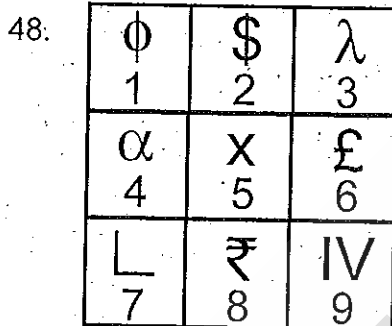


- (A) (1, 7, 9); (2, 3, 6); (4, 5, 8)
 (B) (1, 2, 9); (3, 4, 6); (5, 7, 8)
 (C) (1, 6, 8); (2, 4, 7); (3, 5, 9)
 (D) (1, 7, 8); (2, 9, 3); (6, 4, 5)



- (A) (1, 2, 6, 8); (3, 4, 9); (5, 7)
 (B) (1, 2, 4); (3, 8, 9); (4, 5, 7)

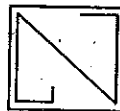
- (C) (1, 8, 6); (2, 3, 5); (4, 7, 9)
 (D) (1, 3, 4); (2, 8, 9); (5, 6, 7)



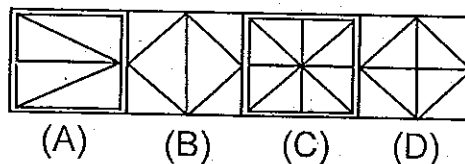
- (A) (4, 7, 9); (1, 3, 8); (2, 5, 6)
 (B) (1, 3, 4); (2, 6, 8); (5, 7, 9)
 (C) (1, 3, 4); (2, 5, 7); (6, 8, 9)
 (D) (1, 3, 8); (2, 5, 7); (4, 6, 9)

Direction (Q. Nos. 49 & 50) : The problem figure is embedded in one of the four answer figures. Find the correct answer figure which contains the problem figure.

49. Problem figure



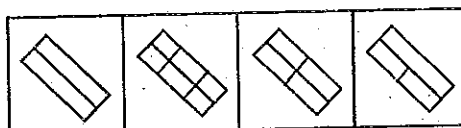
Answer figures



50. Problem figure



Answer figures



(A)

(B)

(C)

(D)

Space for Rough Work

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