

Diagnostic cum Scholarship Tests

SAMPLE PAPER

For Students of Class XI

Paper 1 - IQ

Duration : 60 minutes

Paper Code: 1011-1

Maximum Marks : 90

Please read the instructions and guidelines carefully :

Important Note : Please ensure to accurately input the details for the Question Paper Code as indicated at the top of this sheet (Side 2) into the corresponding columns / fields on the OMR sheet before proceeding with the paper. Incorrectly filled information regarding the class or paper may result in inaccurate outcomes or results.

"This paper has been scientifically designed to evaluate your potential – manifested and hidden for the target examinations mentioned in various sections of the paper. Thus, your adherence to the instructions is critical in the evaluation of the same"

1. This Question paper consists only 1 section.
2. Student should devote allotted time for each section. If a section is easy, then it is easy for everyone & was meant to be like that with a goal in mind. Do not switch over to another section if you find the section to be easy. If a section is tough, then it is tough for everyone. You are advised to spend 60 Minutes on Section-I. This adherence is crucial for assessing your true potential, as this section is meticulously crafted to evaluate your potential for the corresponding competitive examination.
3. Sheets will be given to each candidate for rough work. Candidate must fill all details on the rough sheet and submit the same to invigilator along with OMR sheet. Candidate must mention the Question No. while doing the rough work in the sheet.
4. Please note candidates are not allowed to bring any prohibited items into the exam hall such as electronic devices, mobile phones, smart watch, earphones, calculators, books, notes, formula sheets, and bags.
5. Marking scheme is given in table below:

Section	Subject	Question no.	Marking Scheme for each question	
			Correct answer	Wrong answer
SECTION – I (JEE Main & JEE Advanced) Time Allotted: 60 Minutes	IQ	1 to 30	+3	-1

Section - I

Time: 60 Minutes

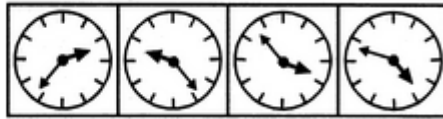
IQ

This section contains 9 Multiple Choice Questions number 1 to 9. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

1. Choose the correct mirror image of the given figure (X) from amongst the four alternatives.



(X)



(1)

(2)

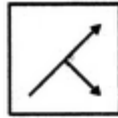
(3)

(4)

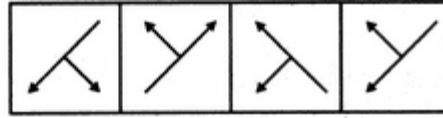
(A) 1
(C) 3

(B) 2
(D) 4

2. Choose the correct mirror image of the given figure (X) from amongst the four alternatives.



(X)



(1)

(2)

(3)

(4)

(A) 1
(C) 3

(B) 2
(D) 4

3. In a certain code, the word SYSTEM is coded as ZEXXHO then how do we code the word FLOWER?

(A) MRTAHT
(C) OQTZHS

(B) LQSAGR
(D) LQSZHT

4. How many such pairs of letters are there in the word INSTRUCTION which have as many letters between them in the word as in English Alphabet?

(A) One
(C) Three

(B) Two
(D) Four

5. A number series is given with one of the terms missing. Choose the correct alternative that will continue the same pattern and replace the question mark (?) in the given series.

7, 11, 15, 23, 31, 39, ?

(A) 45
(C) 52

(B) 50
(D) 55

6. If ROME is written as MORE, then DARE is written as

(A) RDAE
(C) RAED

(B) RDEA
(D) RADE

7. If H = 8 and HAT = 29, then how BOX = ?

(A) 46
(C) 42

(B) 43
(D) 41

8. Rana left home and walked 5 km southwards, turned right, then walked 2 km and turned right, then walked 5 km, again turned left, then walked 5 km. How many kilometres will she have to walk to reach her home straight?
(A) 5 (B) 7
(C) 17 (D) 15
9. Kailash walks 3 km to East and turn South and walks 4 km. Again turns west and walks 3 km. How far is he from the starting point?
(A) 7 km (B) 5 km
(C) 6 km (D) 6 km

This section contains TWO (02) comprehensions. Based on each comprehension, there are THREE (03) questions of Multiple Choice Questions. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

Comprehension-1 for Q. No. 10 to 12

Study the given information carefully to answer the given question.

Among six people - A, B, C, D, E and F each of a different age. A is younger than only D. Only three people are younger than C. F is younger than E. F is not the youngest.

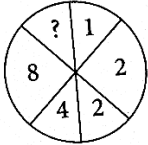
10. Who amongst the following is the youngest?
(A) B (B) A
(C) E (D) C
11. If E's age is 16 yrs, then which of the following may be B's age?
(A) 19 yrs (B) 22 yrs
(C) 18 yrs (D) 12 yrs
12. How many people are younger than E?
(A) One (B) Two
(C) Three (D) Four

Comprehension-2 for Q. No. 13 to 15

Seven boys M, N, P, Q, R, S and T are sitting around a circle facing the centre. P is second to the left of S and third to the right of M. T is third to the left of S. Q is not an immediate neighbour of S. N is not an immediate neighbour of M.

13. Who is third to the right of N?
(A) Q (B) T
(C) P (D) M
14. Who is/are sitting between P and S?
(A) R (B) R and N
(C) N (D) T
15. How many persons are sitting between Q and M on counting clockwise?
(A) Two (B) Three
(C) One (D) Zero

This section contains 9 Multiple Choice Questions number 16 to 24. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

16. A, B and C have to type 506 pages to finish an assignment. A can type a page in 12 minutes, B in 15 minutes and C in 24 minutes. If they divide the task into three parts so that all three of them spend an equal amount of time in typing, what is the number of pages that B should type?
 (A) 172 (B) 176
 (C) 154 (D) 168
17. In a row of people, Manu is 7th from bottom end of row. Shrey is 10 ranks above Manu. If Shrey is 8th from top end, then how many people are there in this row?
 (A) 25 (B) 26
 (C) 24 (D) 23
18. Rahul is taller than Richa but not shorter than Mita. Mita and Mukesh are of same height. Rahul is shorter than Raju. Amongst the students, who is the second tallest?
 (A) Mita (B) Rahul
 (C) Mukesh (D) Cannot be determined
19. Two pipes A and B can fill a tank in 10 hours and 25 hours, respectively, while a third pipe C can empty the full tank in 40 hours. All the three pipes are opened in the beginning. After 6 hours pipe C is closed. How much more time (in hours) is required to fill the remaining tank completely?
 (A) 31/15 (B) 31/14
 (C) 27/14 (D) None of these
20. Select from the answer choices given against each question an appropriate number to replace the question mark.
- | | | | | |
|---|---|---|----|---|
| 4 | 3 | 2 | 9 | 8 |
| 5 | 2 | ? | 35 | |
- (A) 5 (B) 11
 (C) 6 (D) 8
21. Select from the answer choices given against each question an appropriate number to replace the question mark.
- 
- (A) 10 (B) 15
 (C) 32 (D) 12
22. I am facing South. I turn right and walk 20 metre. Then I turn right again and walk 10 metre. Then I turn left and walk 10 metre and then turning right walk 20 metre. Then I turn right again and walk 60 metre. In which direction am I from the starting point ?
 (A) North-East (B) North-West
 (C) North (D) West
23. 4 Men and 6 women after doing work in 5 days get Rs. 1600. 3 Men and 7 women after doing same work in 6 days get Rs. 1740. Then in how many days 7 Men and 6 Women can do the work to get 3760 Rs. ?
 (A) 8 (B) 6
 (C) 9 (D) 10

24. Two pipes can fill a tank in 12 minutes & 15 minutes respectively. If first pipe is changed with a pipe having twice of its radius while second with a pipe having half of second's radius. Now the tank will be filled in :
- (A) $2\frac{6}{7}$ minutes (B) 4 minutes
 (C) 2 minutes (D) $3\frac{1}{3}$ minutes

This section contains TWO (02) comprehensions. Based on each comprehension, there are THREE (03) questions of Multiple Choice Questions. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

Comprehension-1 for Q. No. 25 to 27

- A, B, C, D and E are students in a college.
 (i) A and B study both Physics and Chemistry
 (ii) C and D study both Chemistry and Mathematics
 (iii) D and A study both Electronics and Chemistry
 (iv) E and B study both Mathematics and Electronics
25. Which student studies the most number of subjects?
 (A) E (B) D
 (C) B (D) A
26. Common subject of A, D and C is
 (A) Chemistry (B) Mathematics
 (C) Physics (D) Electronics
27. The pair of students who study only two subjects are
 (A) A, D (B) B, C
 (C) C, E (D) E, D

Comprehension-2 for Q. No. 28 to 30

- Read the given information carefully and answer the following questions:
 Five businessmen, P, Q, R, S and T donate a different amount of money every year to an orphanage. They are married to five women A, B, C, D and E not necessarily in the same order.
 (A) The person who is married to B is neither donates the maximum nor the minimum amount.
 (B) The husband of C donates Rs 5 lakh/year.
 (C) T donates Rs 6 lakh/year
 (D) Q, the husband of E, donates Rs 1 lakh/year more than R, who donates less than T.
 (E) P, who is not married to C donates Rs 4 lakh/year more than S.
 (F) Each of the five businessmen donates at least Rs 1 lakh/year. While Q donates Rs Y lakh/year, where Y is a natural number.
28. Who donates Rs 5 lakh/year?
 (A) S (B) R
 (C) P (D) T
29. Who is married to B?
 (A) P (B) T
 (C) R (D) S
30. If P is not married to A, then whose husband donates the maximum amount of money?
 (A) B (B) E
 (C) A (D) D

FIITJEE

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ANSWER KEY

- | | | | |
|-------|-------|-------|-------|
| 1. D | 2. C | 3. A | 4. D |
| 5. D | 6. D | 7. D | 8. B |
| 9. B | 10. A | 11. D | 12. B |
| 13. D | 14. C | 15. D | 16. B |
| 17. C | 18. D | 19. B | 20. D |
| 21. C | 22. A | 23. A | 24. A |
| 25. C | 26. A | 27. C | 28. A |
| 29. B | 30. D | | |