

## Diagnostic cum Scholarship Tests SAMPLE PAPER For Students of Class XII

### Paper 1 - IQ

Duration : 60 minutes

Paper Code: 1112-1

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.

- In the annual examination Ankita got 10% less marks than Eakta in Mathematics. Ankita got 81 marks. The marks of Eakta are?  
(A) 90 (B) 87  
(C) 88 (D) 89
- The ratio of the number of boys to that of girls in a school is 4 : 1. If 75% of boys and 70% of the girls are scholarship-holders, then the percentage of students who do not get scholarship is?  
(A) 50% (B) 28%  
(C) 75% (D) 26%
- A vendor purchased 40 dozen bananas for Rs. 250. Out of these 30 bananas were rotten and could not be sold. At what rate per dozen should he sell the remaining bananas to make a profit of 20%?  
(A) Rs. 12 (B) Rs. 10  
(C) Rs. 8 (D) Rs. 6
- The difference between CI and SI for 3 years is 992. If the rate of Interest is 10%. Find the Principal?  
(A) 22000 (B) 30000  
(C) 28000 (D) 32000
- The compound interest on Rs. 24000 at 10% per annum for  $1\frac{1}{2}$  years, interest being compounded semi-annually is?  
(A) Rs. 3783 (B) Rs. 3777  
(C) Rs. 3780 (D) Rs. 3781

**Directions (Q.6 – Q.7):** Select the related letters/word/ number from the given alternatives.

- $K \times P : 256 :: H \times S : ?$   
(A) 361 (B) 72  
(C) 128 (D) 144
- $17 : 144.5 :: 13 : ?$   
(A) 87.5 (B) 86.25  
(C) 84.5 (D) 81.25
- Choose the word which is least like the other words in the group.  
(A) Cathedral (B) Mosque  
(C) Temple (D) Monastery
- Choose the word which is least like the other words in the group.  
(A) Calf (B) Cub  
(C) Hireling (D) Duckling

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**

In the following questions, the symbols  $>$ ,  $<$ ,  $\%$ ,  $=$  and  $\geq$  are used with the following meaning as illustrated below:

- ' $P > Q$ ' means 'P is neither greater than nor equal to Q'
- ' $P < Q$ ' means 'P is neither equal to nor smaller than Q'
- ' $P \% Q$ ' means 'P is neither smaller than nor greater than Q'
- ' $P = Q$ ' means 'P is not smaller than Q'
- ' $P \geq Q$ ' means 'P is not greater than Q'

Now in each of the following questions assuming the given statement to be true, find which of the conclusions given below them is/are definitely true and give your answer accordingly.

10. Statements:  $P > X = B < I \geq O$   
 Conclusions:  
 I.  $P > B$   
 II.  $B = O$   
 (A) None is true (B) Only I is true  
 (C) Only II is true (D) Either I or II is true
11. Statements:  $A = B, B \% M, K < M$   
 Conclusions: I.  $A < M$  II.  $B \% A$   
 (A) Only I true (B) Only II true  
 (C) Only I and II are true (D) Either I or II is true
12. Statements:  $R = M, M \geq Z, Z \% A, Y > Z$   
 Conclusions: I.  $Y > A$  II.  $M \geq A$   
 (A) None is true (B) Only I is true  
 (C) Both I and II are true (D) Only II is true

**Comprehension-2 for Q. No. 13 to 15**

Study the following information carefully and answer the questions follows:

Eight people Pawan, Qureshi, Rashid, Sonam, Tarikh, Veer, Wasim and Yogesh like eight different fruits – Papaya, Grapes, Mango, Pomegranate, Guava, Banana, Cherry and Watermelon but not necessarily in same order. They also like different cars namely Audi, BMW, Mercedes, Honda, Swift, Maruti, Ertiga and Xylo but not necessarily in the same order.

Rashid doesn't like Xylo car but likes Banana. Pawan and Tarikh don't like Mercedes car. Pawan doesn't like Papaya. Yogesh doesn't like Watermelon, but likes Honda car. Qureshi's favourite car is Ertiga. Veer likes Pomegranate. Sonam likes Mango and his favourite car is Maruti. The one who likes Grapes has Mercedes. The one who has swift likes Papaya. The one who like Guava likes Audi car.

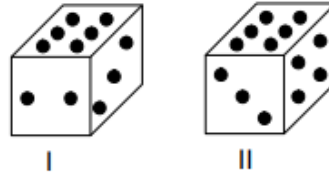
13. Which person likes BMW?  
 (A) Qureshi (B) Sonam  
 (C) Yogesh (D) Rashid
14. Which of the following statement is true?  
 (A) Tarikh likes Mango and has Swift. (B) The one who has Maruti likes Banana.  
 (C) The one who likes Cherry has Honda car. (D) The one who likes Mango has swift.

15. Which of the following combination is true for given people?  
 (A) Yogesh-Mango-Honda (B) Veer-Cherry-Xylo  
 (C) Pawan-Guava-Audi (D) Tarikh-Papaya-BMW

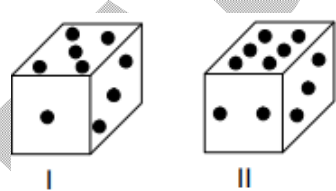
This section contains 9 Multiple Choice Questions number 16 to 24. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

**Directions (Q.16 – Q.17):** In the pictures given below two positions of a single dice is shown. Each side of the dice has dots (•) printed on it, which vary from one to six. Study the positions and answer the following questions accordingly.

16. If there are three dots at the bottom, then how many dots will be on top?  
 (A) 1 or 5  
 (B) 2  
 (C) 4  
 (D) 5



17. If the number of dots is three on top then how many will be at bottom?  
 (A) 1  
 (B) 4  
 (C) 5  
 (D) 6



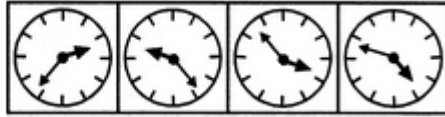
**Directions (Q.18 – Q.19):** In each of the following questions, four numbers are given. Out of these, three are alike in a certain way but the rest one is different. Choose the one which is different from the rest three.

18. (A) 91 (B) 36  
 (C) 49 (D) 56
19. (A) 342 (B) 504  
 (C) 441 (D) 523
20. Choose the odd numeral pair in this question:  
 (A) 23 – 29 (B) 19 – 25  
 (C) 13 – 17 (D) 3 – 5
21. A dishonest dealer professes to sell his goods at the cost price but uses a false weight of 850 g instead of 1 kg. his gain percent is?  
 (A)  $17\left(\frac{12}{17}\right)\%$  (B)  $17\left(\frac{11}{17}\right)\%$   
 (C)  $71\left(\frac{11}{17}\right)\%$  (D)  $11\left(\frac{11}{17}\right)\%$
22. A shopkeeper bought 15 kg of rice at the rate of Rs. 29 per kg and 25 kg of rice at the rate of Rs. 20 per kg. He sold the mixture of both types of rice at the rate of Rs. 27 per kg. His profit in this transaction is?  
 (A) Rs. 125 (B) Rs. 150  
 (C) Rs. 140 (D) Rs. 145
23. Menu : Food : : Catalogue : \_\_\_\_ ?  
 (A) Papers (B) Forms  
 (C) Rack (D) Books

24. 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

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**

Eight persons i.e. P, Q, R, S, T, U, V and W are sitting in a circular table but not necessarily in same order. All are facing towards center.

P sits 2nd to the right of Q, who is an immediate neighbor of R. Three persons sit between R and T, who is not an immediate neighbor of P. W sits 2nd to the left of V, who is not an immediate neighbor of S.

25. Who among the following person sits immediate right of S?  
(A) P (B) R  
(C) T (D) None of these
26. Who among the following person faces U?  
(A) Q (B) R  
(C) S (D) T
27. How many persons are sitting between W and Q?  
(A) Two (B) Three  
(C) One (D) Four

**Comprehension-2 for Q. No. 28 to 30**

A cube having an edge of 12 cm each. It is painted red on two opposite faces, blue on one other pair of opposite faces, black on one more face and one face is left unpainted. Then it is cut into smaller cubes of 1 cm each. Answer the following questions:

28. The total no. of smaller cubes:  
(A) 1720 (B) 1728  
(C) 1748 (D) 1760
29. The number of smaller cubes which are having three-faces painted.  
(A) 2 (B) 3  
(C) 4 (D) 5
30. The number of smaller cubes which are having two-faces painted.  
(A) 78 (B) 80  
(C) 82 (D) 84

# FIITJEE

## Diagnostic cum Scholarship Tests

### SAMPLE PAPER

### For Students of Class XII

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## ANSWER KEY

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