

Diagnostic cum Scholarship Tests

SAMPLE PAPER

For Students of Class X

Paper 1 - IQ

Paper Code: 910-1

Duration : 90 minutes

Maximum Marks : 135

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 of 3 sections.
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 30 Minutes on Section-I, 30 Minutes on Section-II and 30 Minutes on Section-III. Dedicating the required time to finish each section successfully is essential. Opening the next section before completing the allotted time for the preceding section is not permitted. This adherence is crucial for assessing your true potential, as each section is meticulously crafted to evaluate your potential for the corresponding competitive examinations.
3. Candidate should open the seal of Section-II only after devoting 30 minutes on Section-I and Seal for Section-III is to be opened only after devoting 30 minutes on Section-II.
4. 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.
5. 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.
6. Marking scheme is given in table below:

Section	Subject	Question no.	Marking Scheme for each question	
			Correct answer	Wrong answer
SECTION – I (NTSE) Time Allotted: 30 Minutes	IQ	1 to 15	+3	-1
SECTION – II (JEE Main) Time Allotted: 30 Minutes	IQ	16 to 30	+3	-1
SECTION – III (JEE Advanced) Time Allotted: 30 Minutes	IQ	31 to 45	+3	-1

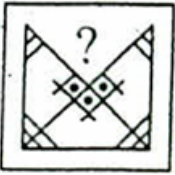
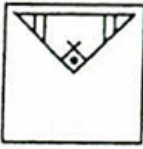
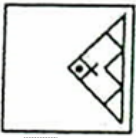
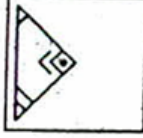
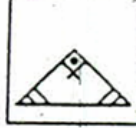
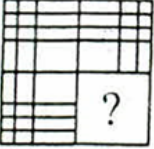

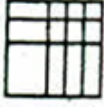
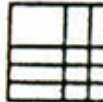

Section - I

Time: 30 Minutes

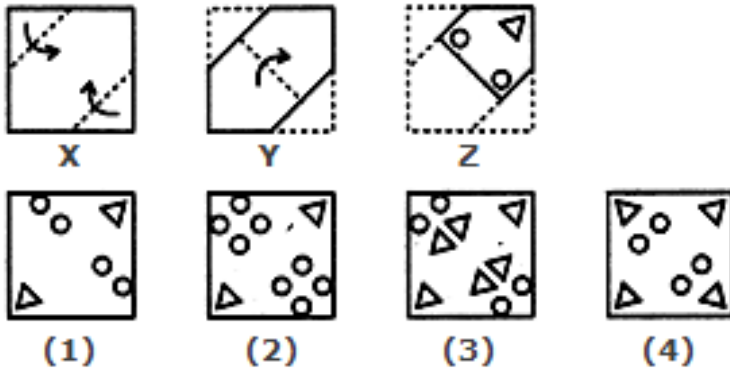
IQ

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.

Directions (Q.1 to Q.2): In each of the following questions, select a figure from amongst the four alternatives, which when placed in the black space of fig. (X) would complete the pattern.

1. 
- (X)
- (A) 
- (B) 
- (C) 
- (D) 
2. 
- (X)
- (A) 
- (B) 
- (C) 
- (D) 

3. Choose a figure which would most closely resemble the unfolded form of Figure (Z).



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

4. Select a suitable figure from the Answer Figures that would replace the question mark (?).
Problem Figures: Answer Figures:



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

5. Find the missing term.

___ aba ___ ba ___ ab

- (A) abbba (B) abbab
(C) baabb (D) bbaba

6. Find the missing term.

EH, JK, ON, ___

- (A) UQ (B) TR
(C) TQ (D) UR

7. 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 Rs. 3760 ?

- (A) 8 (B) 6
(C) 9 (D) 10

8. In a certain code GARNISH is written as RAGHSIN. How will GENIOUS be written in that code?

- (A) ENGOIUS (B) NEGIOUS
(C) NGEOISU (D) GENOISU

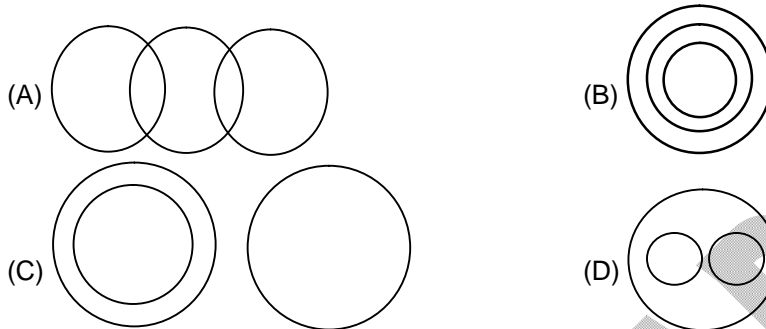
9. Raja moves from his house and walks 10 feet towards east, turns right and walks 3 feet. Again he turns right and walks 14 feet. How far is he from his house?

- (A) 4 feet (B) 5 feet
(C) 24 feet (D) 42 feet

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

Please choose the suitable venn diagram among three given classes than the other diagram offered.

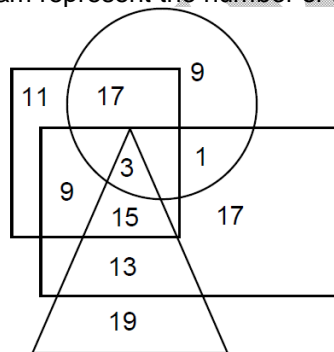


10. Flowers, Tools, screw – driver
11. Roses, Tulips, Flowers
12. Fathers, aunts, Bank employees

Comprehension-2 for Q. No. 13 to 15

Study the diagram and answer each of the following.

The triangle represents students who scored 85% and above in science, the circle represents students who scored 85% and above in Maths, the rectangle represents students who scored 85% and above in social science and the square represents who scored 85% and above in English. The numbers given in the diagram represent the number of students in that particular category.



13. How many students scored 85% and above in all the subjects?
 (A) 3 (B) 9
 (C) 1 (D) 15
14. How many students scored 85% and above in English only?
 (A) 17 (B) 11
 (C) 9 (D) 15
15. How many students scored 85% and above in Maths only?
 (A) 11 (B) 15
 (C) 17 (D) 9

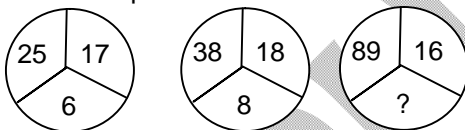
Section – II

Time: 30 Minutes

IQ

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 is thrice as efficient as B and takes 10 days less than B takes to do the same work. In how many days, B alone can finish the whole work?
 (A) 15 (B) 10
 (C) 9 (D) 8
17. A number is divided by 2, 3, 4, 5 or 6, remainder in each case is one. But the number is exactly divisible by 7. The number lies between 250 and 350, the sum of digits of the number will be
 (A) 4 (B) 7
 (C) 6 (D) 10
18. $a + b = c$ and $abc = 30$, then what is the value of $a^3 + b^3 - c^3$?
 (A) 60 (B) 90
 (C) -90 (D) -60
19. Numbers in the following questions have been arranged using a particular method. Find the number in place of '?'



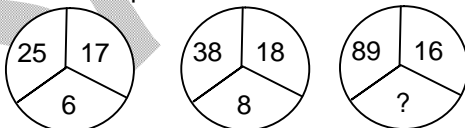
- (A) 13 (B) 15
 (C) 17 (D) 19

20. Numbers in the following questions have been arranged using a particular method. Find the number in place of '?'

3	8	10	2	?	1
6	56	90	2	20	0

- (A) 0 (B) 3
 (C) 5 (D) 7

21. Numbers in the following questions have been arranged using a particular method. Find the number in place of '?'



- (A) 13 (B) 15
 (C) 17 (D) 19

22. Numbers in the following questions have been arranged using a particular method. Find the number in place of '?'

3	8	10	2	?	1
6	56	90	2	20	0

- (A) 0 (B) 3
 (C) 5 (D) 7

23. By following a certain logic **MTUXTRVN** is written as **NUVXTQUM**. How is **ASUMNJKL** written in that logic ?
(A) BTVMNIJK (B) BTVMNKLM
(C) BTVNMIJK (D) ZRTMNIJK
24. In a certain code language the word **ATMOSPHERE** is written as **BSLPROGFQF**. How will be word **NEIGHBOURS** be written in that language ?
(A) MFJHGAPVQR (B) MFJFGAPVQR
(C) ODJFIAPTSR (D) ODJEIAPTSR

*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

Study the following information carefully and answer the questions that follows. Six friends are sitting around a circular table at equal distance from each other. Dog is sitting two places right of Cat who is exactly opposite to Monkey. Monkey is on immediate left of Rat, who is exactly opposite to Donkey. Horse is also sitting at the table.

25. The angle subtended by Cat and Rat at the end of the table is:
(A) 60° (B) 90°
(C) 120° (D) 150°
26. The angle subtended by Monkey and Cat at the end of the table is:
(A) 60° (B) 120°
(C) 180° (D) 240°
27. Dog is sitting to the:
(A) Right of Monkey (B) Right of Horse
(C) Left of Cat (D) Right of Donkey

Comprehension-2 for Q. No. 28 to 30

Study the following information carefully to answer these questions. A vehicle starts from point P and runs 10 km towards North. It takes a right turn and runs 15 km. It now runs 6 km after taking a left turn. It finally takes a left turn, runs 15 km and stops at point Q.

28. How far is point Q with respect to point P?
(A) 16 km (B) 25 km
(C) 4 km (D) 0 km
29. Towards which direction was the vehicle moving before it stopped at point Q?
(A) North (B) East
(C) South (D) West
30. When the time is 10:30, if the minute hand points towards south, the hour hand will point towards
(A) North east (B) North west
(C) South east (D) South west

Section – III

Time: 30 Minutes

IQ

This section contains 9 Multiple Choice Questions number 31 to 39. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

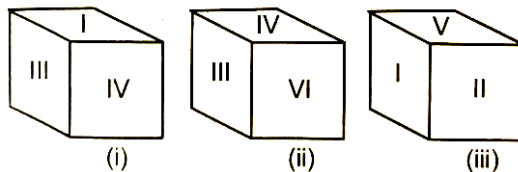
31. Two pipes can fill a tank in 12 minutes & 15 minutes respectively. If first pipe is changed with a pipe having twice of its radius while second with a pipe having half of second's radius. Now the tank will be filled in :
- (A) $2\frac{6}{7}$ minutes (B) 4 minutes
(C) 2 minutes (D) $3\frac{1}{3}$ minutes
32. 10 men started the work, after working for some days 4 men left the work, so the work which would have been completed in 40 days, takes 50 days to be completed. Then tell after how many days, the 4 men left the work.
(A) 20 (B) 25
(C) 15 (D) 18
33. In two vessels of same quantity the ratio of water to milk is 3 : 2 & 5 : 4. Then after mixing them in 1 : 2 ratio, what will be ratio of milk to water ?
(A) 77 : 58 (B) 58 : 77
(C) 68 : 77 (D) 77 : 68
34. In a factory the workers number decreases in 8 : 7 and their wages also decrease in 7 : 2 ratio. Then find the changes in CTC [cost to company] of all workers combined.
(A) Decrease 4 : 1 (B) Increase 1 : 4
(C) Decrease 5 : 2 (D) Increase 2 : 5
35. $a + b : b + c : c + a = 6 : 7 : 8$
If $a + b + c = 14$
Then find $a - b - c = ?$
(A) $-\frac{14}{3}$ (B) $-\frac{14}{5}$
(C) $-\frac{14}{7}$ (D) $-\frac{14}{9}$
36. If two vessels of same volume is filled with water of $\frac{2}{3}$ & $\frac{2}{5}$ of their respective volume. The remainders are filled with milk and then both the vessel are poured in a third vessel. What will be the ratio of water to milk ?
(A) 8 : 7 (B) 7 : 5
(C) 6 : 5 (D) 5 : 4

37. What is the difference between a discount of 39% on Rs. 15400 and two successive discounts of 24% and 15% on the same amount?
 (A) Rs.542.8 (B) Rs. 548.6
 (C) Rs. 552.2 (D) Rs. 554.4
38. K is a place which is located 2 km away in the North – West direction from the capital P, R is another place and is located 2 km away in the South – West direction from K. M is another place and that is located 2 km away in the North – West direction from R. T is yet another place that is located 2 km away in the South – West direction from M. In which direction is T located in relation to P?
 (A) South – West (B) North – West
 (C) West (D) North
39. One term missing number.
 21, 25, 33, 49, 81,.....
 (A) 145 (B) 129
 (C) 113 (D) 97

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. 40 to 42

A dice is thrown 3 times and its 3 positions are given. On the basis of given information answer the following questions:



40. Which number is opposite to V?
 (A) III (B) IV
 (C) II (D) VI
41. Which number is opposite to I?
 (A) V (B) VI
 (C) II (D) III
42. Which number is opposite to II?
 (A) III (B) IV
 (C) V (D) None of these

Comprehension-2 for Q. No. 43 to 45

Read the following information carefully and answer the questions given below: Six members of a family A, B, C, D, E and F are Psychologist, manager, Advocate, Jeweller, Doctor and Engineer but not in the same order.

- (I) Doctor is the grandfather of F, who is a psychologist
- (II) Manager D is married to A
- (III) C, who is a jeweller, is married to advocate
- (IV) B is the mother of F and E
- (V) There are two married coupled in the family

43. How A is related to E?
(A) Father (B) Grandmother
(C) Wife (D) Grandfather
44. What is the profession of A?
(A) Manager (B) Engineer
(C) Advocate (D) Doctor
45. Who are the two couples in the family?
(A) AD and CB (B) AB and CD
(C) AE and DE (D) AC and BD

SAMPLE PAPER



Diagnostic cum Scholarship Tests

SAMPLE PAPER

For Students of Class X

Paper 1 - IQ

Paper Code: 910-1

ANSWER KEY

- | | | | |
|-------|-------|-------|-------|
| 1. D | 2. C | 3. B | 4. A |
| 5. B | 6. C | 7. A | 8. C |
| 9. B | 10. C | 11. D | 12. A |
| 13. A | 14. B | 15. D | 16. A |
| 17. A | 18. C | 19. B | 20. C |
| 21. B | 22. C | 23. A | 24. B |
| 25. C | 26. C | 27. D | 28. A |
| 29. D | 30. B | 31. A | 32. B |
| 33. A | 34. A | 35. A | 36. A |
| 37. C | 38. C | 39. A | 40. B |
| 41. B | 42. A | 43. D | 44. D |
| 45. A | | | |