

VISA

Vision Infinity Scholarship Award

Students of Vision Infinity who secure All India Rank in IIT-JEE within top100, will be Awarded scholarship for four years during B.Tech in IIT

5 Year

| All India Rank in IIT-JEE | Scholarship | Total (in four years) |
|---------------------------|------------------|-----------------------|
| AIR 1 | Rs. 10,000/month | Rs. 4,80,000/- |
| AIR 2 | Rs. 7,500/month | Rs. 3,60,000/- |
| AIR 3 | Rs. 6,000/month | Rs. 2,88,000/- |
| AIR 4 -10 | Rs. 5,000/month | Rs. 2,40,000/- |
| AIR 11- 20 | Rs. 3,000/month | Rs. 1,44,000/- |
| AIR 21-30 | Rs. 1,500/month | Rs. 72,000/- |
| AIR 31-50 | Rs. 1,000/month | Rs. 48,000/- |
| AIR 51-100 | Rs. 500/month | Rs. 24,000/- |

* Terms & Conditions apply

Model Test Paper

Five Year Programme

Name of the Student :

Reg. No. :

Duration : 1.00 hour

Max. Marks : 150

Please read the instructions carefully. You are allotted 3 minutes specifically for this purpose.

INSTRUCTIONS :

1. This Question Paper contains 50 Questions.
2. Each question has 4 choices for its answer (A), (B), (C) and (D).
3. Only ONE of them is the right answer.
4. There is **no negative marking**.
5. For each question you will be awarded +3 marks.
6. In all other cases you will be awarded 0 marks.
7. Use HB pencil to fill the bubble corresponding to correct answer.
8. *You should submit the question paper & answer sheet after the completion of the test to the invigilator.*
9. *You should keep the question paper & answer sheet clean. Rough work must be done in the space provided.*

MATHEMATICS

1. If $\frac{x}{4} = \frac{90}{120}$, then the value of x is :
- (A) 0 (B) 1
(C) 2 (D) 3
2. The sum of $\frac{-9}{10}$ and $\frac{22}{15}$ is :
- (A) $\frac{13}{30}$ (B) $\frac{17}{30}$
(C) $\frac{-17}{30}$ (D) $\frac{-13}{30}$
3. What number should be subtracted from $\frac{26}{33}$ so as to get $\frac{-5}{11}$?
- (A) $\frac{41}{33}$ (B) $\frac{-41}{33}$
(C) $\frac{21}{33}$ (D) $\frac{-21}{33}$
4. The decimal form of $\frac{-15}{8}$ is :
- (A) 1.675 (B) 1.775
(C) 1.875 (D) 1.975.
5. The absolute value of $\left(\frac{-2}{3}\right)^3$ is :
- (A) $\frac{-8}{27}$ (B) $\frac{8}{27}$
(C) $\frac{4}{9}$ (D) $\frac{2}{3}$
6. The value of x, so that $\left(\frac{5}{3}\right)^{-5} \times \left(\frac{5}{3}\right)^{-11} = \left(\frac{5}{3}\right)^{8x}$ is :
- (A) 2 (B) 2
(C) 3 (D) 3.

7. A car travels 432km on 48 litres of petrol. How far would it travel on 20 litres of petrol ?
 (A) 180 km (B) 200km
 (C) 220km (D) 240km.
8. The value of $(6^\circ - 2^\circ)(6^\circ + 2^\circ)$ is :
 (A) 32 (B) 4
 (C) 8 (D) 0.
9. The value of 297×303 is :
 (A) 89891 (B) 89991
 (C) 89881 (D) 89981.
10. The value of $a^3 - b^3$ is :
 (A) $(a - b)(a^2 - ab + b^2)$ (B) $(a + b)(a^2 - ab + b^2)$
 (C) $(a - b)(a^2 + ab + b^2)$ (D) $(a + b)(a^2 + ab + b^2)$.
11. If $2x - 3 = x + 4$, then the value of x is :
 (A) 6 (B) 7
 (C) 8 (D) 9
12. Sum of three consecutive integers is 24 then the greatest integer is :
 (A) 7 (B) 8
 (C) 9 (D) 10.
13. A quadrilateral has three angles measuring 70° , 60° , 110° . Then the measure of the fourth angle is :
 (A) 110° (B) 120°
 (C) 130° (D) 140° .
14. The measure of angle in semicircle is :
 (A) 90° (B) 100°
 (C) 120° (D) 75° .
15. The number of faces of a cuboid is :
 (A) 4 (B) 6
 (C) 8 (D) 12.

16. If 3% of b is Rs. 9, then the value of b is :
(A) Rs 100 (B) Rs 150
(C) Rs 250 (D) Rs 300.
17. If Principal = Rs 800, Rate = 6% per annum and time = 4 years then interest will be :
(A) Rs 992 (B) Rs 800
(C) Rs 192 (D) can not find.
18. Which of the following is not a pythagorean triplet :
(A) (3, 4, 5) (B) (5, 12, 13)
(C) (8,15, 17) (D) (7, 12, 18).
19. Which of the following are not the sides of a triangle :
(A) 15, 10, 25 (B) 12,15,17
(C) 14, 48, 50 (D) 27, 36, 45.
20. The angles of a quadrilateral are in the ratio 1 : 2 : 3 : 4. Then the measure of smallest angle is :
(A) 36° (B) 25°
(C) 30° (D) 144°.

SCIENCE

21. Which of the following expressions can be used to calculate the density of a body ?
(A) $\frac{\text{Mass}}{\text{Volume}}$ (B) Mass \times Volume
(C) $\frac{\text{Volume}}{\text{Mass}}$ (D) $\frac{\text{Mass}}{\text{Area}}$
22. Which of the following statements is false ?
(A) The area of a rectangle is found by multiplying its length and breadth
(B) Volume increases n^3 times if the length of each side of a regular solid is increased n times
(C) Matter is more densely packed in gold than in iron
(D) The S.I. unit of density is kgm^3 .

23. Ten calories of heat would raise the temperature of 2g of water by :
(specific heat of water = 1 cal/g °C)
(A) 2°C (B) 5°C
(C) 8°C (D) 10°C.
24. Transfer of energy between different parts of a body, or from one body to another in contact with it is called :
(A) Conduction (B) Convection
(C) Radiation (D) Boiling.
25. Which of the following is a heat insulator ?
(A) Air (B) Silver
(C) Iron (D) Aluminium.
26. In a plane mirror, which type of image is formed ?
(A) Real (B) Virtual
(C) Inverted (D) Inverted and virtual.
27. Human beings can hear sounds of frequencies :
(A) Below 20 Hz (B) More than 20,000 Hz
(C) Between 20 Hz and 20,000 Hz (D) Between 20Hz and 40Hz.
28. In which of the following materials is the speed of sound maximum ?
(A) Air (B) Sea water
(C) Fresh water (D) Iron.
29. Which of the following statements is false ?
(A) Two type of charges exist in nature
(B) Rubbing with another body can charge a body
(C) Like charges repel while unlike charges attract each other
(D) A body charged by the method of contact acquires the same kind of charge as that of the charged body.
30. Which of the following statement is incorrect ?
(A) Tube light is a luminous object
(B) The materials which do not allow light to pass through them at all are called opaque
(C) There are two laws of reflection
(D) Spherical mirrors are only concave in nature.

31. Acetic acid is found in :
 (A) Vinegar (B) Curd
 (C) Tamarind (D) Soap.
32. The solution which do not change the colour of red or blue litmus are known as
 (A) Acidic solution (B) Basic solution
 (C) Neutral solution (D) Colloidal solution.
33. When carbon dioxide is passed through lime water, which of the following is formed as main product :
 (A) Calcium carbonate (B) Calcium oxide
 (C) Calcium hydroxide (D) Calcium chloride.
34. Magnesium reacts with air to form :
 (A) MgO_2 (B) MgO
 (C) Mg_2O_3 (D) MgO_4 .
35. $CO_2 + Ca(OH)_2 \rightarrow CaCO_3 + 'A'$. What is A .
Carbon dioxide Lime water Calcium carbonate
 (A) CO_2 (B) CaO
 (C) H_2O (D) $Ca(OH)_2$.
36. Acid turns blue litmus
 (A) Black (B) Red
 (C) Deep violet (D) violet.
37. Solutions of substances that show different colour in acidic, basic and neutral solution are called
 (A) Indicators (B) Isotope
 (C) Isobar (D) Isotone.
38. $Acid + Base \rightarrow Salt + 'A'$ A is :
 (A) Water (B) Acid
 (C) Base (D) CO_2 .

39. The substances which are bitter in taste and feel soapy on touching are known as
- (A) Acid (B) Base
(C) Salt (D) Indicator.
40. Curd, Lemonjuice, Orange juice are sour in taste because these substances contain :
- (A) Acid (B) Base
(C) Salt (D) Water.
41. The essential requirement for photosynthesis are:
- (A) Chlorophyll (B) Sunlight
(C) Fruit (D) Chlorophyll and sunlight
42. Which gas is produce during photosynthesis?
- (A) CO₂ (B) O₂
(C) N₂ (D) H₂
43. In the following X is,
- buccal cavity → oesophagus → X → intestine:
- (A) Stomach (B) Anus
(C) Large intestine (D) Liver.
44. Rearing of silkworm is:
- (A) sericulture (B) apiculture
(C) domestication (D) aquaculture
45. In tropical rain forests, population of plants and animal are:
- (A) Very less (B) Less
(C) More (D) Huge
46. Clay and loam are suitable for growing:
- (A) Apple (B) Water lemon
(C) Rice (D)Wheat.

47. In cockroaches, air enters the body through :
- (A) Lungs (B) Gills
(C) Spiracles (D) Skin
48. Removal of waste products from the body is called :
- (A) excretion (B) circulation
(C) digestion (D) waste removal
49. The fusion of male and female gamete is called :
- (A) pollination (B) cross pollination
(C) fertilization (D) reproduction
50. Soil erosion is due to:
- (A) Deforestation (B) Forestation
(C) Plantation (D) Microorganism.

ANSWER

- | | | | | |
|-------|-------|-------|-------|-------|
| 1. D | 2. B | 3. A | 4. C | 5. B |
| 6. B | 7. A | 8. D | 9. B | 10. C |
| 11. B | 12. C | 13. B | 14. A | 15. B |
| 16. D | 17. C | 18. D | 19. A | 20. A |
| 21. A | 22. D | 23. B | 24. A | 25. A |
| 26. B | 27. C | 28. D | 29. C | 30. D |
| 31. A | 32. C | 33. A | 34. B | 35. C |
| 36. B | 37. A | 38. A | 39. B | 40. A |
| 41. D | 42. B | 43. A | 44. A | 45. D |
| 46. D | 47. C | 48. A | 49. C | 50. A |