VISA

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4 Year

All India Rank in IIT-JEE	Scholarship	Total (in four years)
AIR 1	Rs. 10,000/month	Rs. 4,80,000/-
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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

Four 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.***

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MATHEMATICS

1. The area of a square field is $30\frac{1}{4}m^2$. Then the length of each side of the field is :

(A) 8.5m (B) 7.5m

(C) 6.5m (D) 5.5m.

2. The cube root of 17576 is :

(A) 26 (B) 16

(C) 36 (D) 26.

3. If $x+\frac{1}{x}=6$, then the value of $x^2+\frac{1}{x^2}$ is :

(A) 36 (B) 34

(C) 32 (D) 30.

4. The value of $\frac{(a^2-b^2)(b^2-c^2)(c^2-a^2)}{(a-b)(b-c)(c-a)}$:

(A) (a + b) (b + c) (c + a) (B) (a b) (b c) (c a)

(C) (a + b + c) (D) (a + b + c) (a b c)

5. The value of $\frac{155\times155\times155-55\times55\times55}{155\times155+155\times55+55\times55}$ is :

(A) 200 (B) 300

(C) 18555 (D) 100.

6. If $\frac{x}{4}-5=\frac{x}{5}+5$ then the value of x is:

(A) 100 (B) 200

(C) 300 (D) 400.

7. A bat is bought for Rs 150 and sold for Rs 180. The gain percent is :

(A) 20% (B) 25%

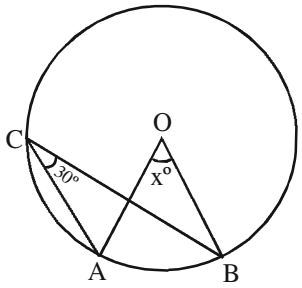
(C) 15% (D) 18%.

8. The difference between two selling prices of a shirt at profits 6% and 8% is Rs 10. Then CP of the shirt is :

(A) Rs 600 (B) Rs 800

(C) Rs 500 (D) Rs 450.

9. In the given figure O is the centre of the circle then the value of x° is :



(A) 120° (B) 60°

(C) 30° (D) 45°.

10. If the radius of the base of a cylinder is 14 cm and height is 10 cm, then the volume of cylinder is:

(A) $1760\pi \text{cm}^3$ (B) $1840\pi \text{cm}^3$

(C) $1960\pi \text{cm}^3$ (D) $1200\pi \text{cm}^3$.

11. The mean of first five even number is :

(A) 5 (B) 4

(C) 6 (D) 8.

12. 5% of a number is 20, then the number is:

(A) 200 (B) 400

(C) 600 (D) 800.

13. The value of $\left(\frac{2}{3}\right)^0 + \left(\frac{3}{2}\right)^0$ is:

(A) 4 (B) 3

(C) 2 (D) 1.

14. The value of $(a + b)^2 \quad (a \quad b)^2$ is :

(A) 2ab (B) 4ab

(C) 2ab (D) 4ab.

15. If $a + b + c = 9$, and $ab + bc + ca = 40$, then the value of $a^2 + b^2 + c^2$ is :

(A) 0 (B) 1

(C) 2 (D) 3.

16. The smallest number by 392 must be multiplied so that product is a perfect cube :

(A) 2 (B) 3

(C) 5 (D) 7.

17. The value of $4 \times 9^{5/2} \times 9^{-3/2}$ is :

(A) 36 (B) 30

(C) 44 (D) None of these.

18. The factor of x^2 $9x + 20$ is :

(A) $(x + 4)(x + 5)$ (B) $(x \quad 4)(x \quad 5)$

(C) $(x \quad 4)(x + 5)$ (D) $(x + 4)(x \quad 5)$.

19. The value of $\frac{a^4 - b^4}{a - b}$ is :

(A) $(a-b)(a^2-b^2)$ (B) $(a+b)(a^2-b^2)$

(C) $(a+b)(a^2+b^2)$ (D) $(a-b)(a^2+b^2)$.

20. The sum of two consecutive odd number is 64. Then the smaller odd number is :

(A) 31 (B) 29

(C) 27 (D) 25.

SCIENCE

21. The star which appears stationary from Earth is:

(A) Sirius (B) Cygnus

(C) Polestar (D) Alpha Centauri

22. The unit of light year is:

(A) meter (B) m/s

(C) sec (D) m/s^2.

23. The moon completes one revolution around the earth in :

(A) 12 days (B) 27.3 days

(C) 273 days (D) 1year

24. The refractive index of water with respect to air is:

(A) 1 (B) 1.33

(C) 1.5 (D) 1.6

25. The line joining the centres of curvature of the two refracting spherical surfaces of a lens is called:

(A) focal length (B) principal axis

(C) optical axis (D) radius of curvature

26. Light rays from sun passing through a glass prism splits into a band of ..... colours:

(A) Five (B) Six

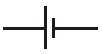
(C) Seven (D) Eight

27. Our eyes have a convex lens whose focal length can be changed at will by the action of:

(A) Iris (B) Ciliary muscles

(C) Retina (D) Cornea

28. Which of the following is the circuit symbol of an electric bulb?

(A)  (B) 

(C)  (D) 

29. Which of the following is a conductor ?

(A) Mica (B) Rubber

(C) Wood (D) Graphite

30. Which of the following is a renewable source of energy ?

(A) Wood (B) Coal

(C) Petroleum (D) Natural gas

31. Compounds containing Carbon and hydrogen are called .....

(A) Carbohydrogen (B) hydrocarbon

(C) Catenation (D) Isomer

32. Fullerenes have Cage-like Structures, It is also called .....

(A) bucky balls (B) Cricket ball

(C) Tennis ball (D) Both (A) and (B).

33. The element with atomic number 15 is :

(A) a metal (B) a non-metal

(C) a metalloid (D) Inert gas.

34. Neutron possesses :

(A) Positive charge (B) No net charge

(C) Negative charge (D) All are correct.

35. Proton possesses :

(A) Positive charge (B) No net charge

(C) Negative charge (D) All are correct.

36. $CO_2 + H_2O \rightarrow (A)$. What is (A) :

(A) hydrochloric acid (B) carbonic acid

(C) nitric acid (D) sulphuric acid.

37. In a covalent bond : (Non polar)

(A) atoms share electrons (B) positive ions are attached to negative ions

(C) atoms either take or give electrons (D) atoms share protons.

38. $CaCO_3 \xrightarrow{\Delta} CO_2 + CaO, \Delta$ represents :

(A) Heating (B) Cooling

(C) Boiling (D) Freezing.

39. Roasting is generally done in case of the following :

(A) Oxide ores (B) Silicate ores

(C) Sulphide ores (D) Carbonate ores.

40. Positive ions are formed from the neutral atom by the loss of :

(A) Positrons (B) Protons

(C) Electrons (D) Neutrons

41. To enter or leave a cell, substances must pass through:

(A) Nucleus (B) Golgi complex

(C) Microtubule (D) Plasma membrane.

42. Plant cell walls mainly consist of:

(A) starch (B) cellulose

(C) protein (D) glycogen

43. "Suicide bags" of cells are:

(A) Golgi bodies (B) Lysosomes

(C) Contractile vacuoles (D) Ribosomes.

44. DNA is present in:

(A) Lysosomes (B) Chromosomes

(C) Golgi complex (D) Endoplasmic reticulum.

45. The plants cell differ from Animals cell in having :

(A) Chloroplast (B) Vacuole

(C) Cell wall (D) All

46. Bacteria were discovered by :

(A) Linnaeus (B) Pasteur

(C) Robert Koch (D) Leeuwenhoek.

47. When bacteria are rod like, they are called:

(A) bacilli (B) cocci

(C) spirilla (D) vibrios.

48. The infection of Polio virus occurs through

(A) Mosquito bite
(B) Inoculation
(C) Tse tse fly bite
(D) Contamination of food and water

49. Cyanobacteria are also known as :

(A) Green algae
(B) Brown algae
(C) Blue-green algae
(D) Ancient bacteria.

50. There are animals which are useful to us in more than one way. Select an appropriate code to match the animals to utility :

A.	Milk, leather and butter	1.	Goat
B.	Milk and flesh	2.	Horse
C.	Transport and flesh	3.	Sheep
D.	Fur, Milk and meat	4.	Buffalo

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

ANSWER

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