VISA

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4Year
2011

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AIR 1	Rs. 10,000/month	Rs. 4,80,000/-
AIR 2	Rs. 7,500/month	Rs. 3,60,000/-
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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-I

Four Year Programme

Name of the Student : ..... Reg. No. : .....

Duration : 1.30 hours Max. Marks : 225

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

INSTRUCTIONS :

1. This Question Paper contains 75 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 additive inverse of -18 is

   (A) 18 (B) – 18

   (C) $\frac{1}{18}$ (D) $\frac{-1}{18}$

2. The sum of $\frac{-2}{5}$ and $\frac{4}{5}$ is

   (A) $\frac{-6}{5}$ (B) $\frac{-2}{5}$

   (C) $\frac{2}{5}$ (D) $\frac{6}{5}$

3. What least number must be subtracted from 170 to make it a perfect square ?

   (A) 1 (B) 26

   (C) 49 (D) 6

4. Which of the following is not a Pythagorean triplet ?

   (A) (3, 4, 5) (B) (6, 8, 10)

   (C) (5, 12, 13) (D) (2, 3, 4)

5. The value of $\sqrt[3]{125 \times 64}$ is

   (A) 20 (B) 25

   (C) 40 (D) 100

Space for rough work

6. Mohit bought a CD for Rs . 750 and sold it for Rs. 975. Then his gain is

(A) Rs. 200 (B) Rs. 225

(C) Rs. 250 (D) Rs. 275

7. The cost price of 12 candles is equal to the selling price of 15 candles. The loss percent is

(A) 5% (B) 10%

(C) 15% (D) 20%

8. The marked price of a ceiling fan is Rs. 1250 and shopkeeper allows a discount of 6% on it. Then the selling price of the fan is

(A) Rs. 1125 (B) Rs. 1150

(C) Rs. 1175 (D) Rs. 1200

9. The simple interest on Rs. 2000 at the rate of 10% per annum for two years is

(A) Rs 100 (B) Rs. 200

(C) Rs. 240 (D) Rs. 400

10. The compound interest on Rs. 1000 at the rate of 10% per annum for three years is

(A) Rs 1331 (B) Rs. 331

(C) Rs. 1441 (D) Rs. 441

Space for rough work

11. The product of (2x + 3) and (3x – 4) is

(A) $6x^2 - x + 12$ (B) $6x^2 + x - 12$

(C) $6x^2 - 7x + 12$ (D) $6x^2 + 7x - 12$

12. The value of $\left(x + \frac{1}{x}\right)\left(x - \frac{1}{x}\right)$ is

(A) $x^2 - \frac{1}{x^2}$ (B) $x^2 + \frac{1}{x^2}$

(C) $x^3 + \frac{1}{x^3}$ (D) $x^3 - \frac{1}{x^3}$

13. If $x - y = 7$ and $xy = 9$, then the value of $x^2 + y^2$ is

(A) 57 (B) 67

(C) 59 (D) 69

14. $\frac{2}{3}$ of a number is 30 less than the original number. then the original number is

(A) 60 (B) 90

(C) 120 (D) 150

15. The number whose fifth part increased by 10 is equal to its fourth part diminished by 10 is

(A) 100 (B) 200

(C) 400 (D) 800

Space for rough work

16. Any two adjacent angles of a parallelogram are

(A) Complementary (B) Supplementary

(C) Always equal (D) None of these.

17. Two adjacent angles of a parallelogram are $(2x+25)^o$ and $(3x-5)^o$. The value of x is

(A) 28 (B) 32

(C) 36 (D) 42

18. The bisectors of any two adjacent angles of a parallelogram intersect at

(A) 30^o (B) 60^o

(C) 90^o (D) 100^o

19. Two complementary angles differ by 20^o then the angles are

(A) 55^o, 35^o (B) 60^o, 40^o

(C) 50^o, 40^o (D) 70^o, 50^o

20. Two sides of a parallelogram are in the ratio 5:3. If its perimeter in 64 cm. Then the length of longer side is

(A) 12 cm (B) 20 cm

(C) 25 cm (D) 40 cm

21. The area of a parallelogram whose one side is 10 cm and the corresponding altitude 6 cm is

(A) 30 cm^2 (B) 60 cm^2

(C) 120 cm^2 (D) 40 cm^2

Space for rough work

22. The area of a rhombus whose diagonals have length 8 cm and 6 cm respectively is :

(A) 24 cm^2 (B) 48 cm^2

(C) 40 cm^2 (D) 60 cm^2

23. The area of a rectangle whose perimeter is 60 cm and one of the side 10 cm is :

(A) 50 cm^2 (B) 600 cm^2

(C) 200 cm^2 (D) 100 cm^2

24. The area of a trapezium whose parallel sides have the length 10 cm and 12 cm and distance between them is 15 cm is :

(A) 165 cm^2 (B) 330 cm^2

(C) 150 cm^2 (D) 180 cm^2

25. The diagonal of a square whose each side is 100 m is :

(A) 141 m (B) 160 m

(C) 180 m (D) 200 m

26. The mean of first five natural numbers is :

(A) 1 (B) 2

(C) 3 (D) 4

27. The mean of first 10 whole numbers is :

(A) 4.5 (B) 5.5

(C) 6.5 (D) 5

Space for rough work

28. The area of circle whose radius 7 cm is :

(A) 144 cm^2 (B) 154 cm^2

(C) 170 cm^2 (D) 124 cm^2

29. The number of digits used to write from 1 to 99 is :

(A) 185 (B) 189

(C) 200 (D) 210

30. The value of $\frac{70 \times 70 - 30 \times 30}{70 - 30} =$

(A) 100 (B) 200

(C) 340 (D) 45

SCIENCE

31. Which of the following is an example of artificial satellite :

(A) Mercury (B) Venus

(C) INSAT 3B (D) Jupiter.

32. Orion is :

(A) a star (B) Seen only with a telescope

(C) a constellation (D) a natural satellite of Mars.

33. Asteroids are found between the orbits of Mars and

(A) Venus (B) Jupiter

(C) Earth (D) Mercury

Space for rough work

34. Which of the following planet was discovered only after the invention of telescopes ?

(A) Mercury (B) Venus

(C) Saturn (D) Uranus.

35. Transmission of television programmes over distant places is made possible with the help of :

(A) Asteroids (B) Morning star

(C) Satellites (D) Constellations.

36. A lighted bulb placed at the focus of a convex lens will produce

(A) Parallel beam of light

(B) Diverging beam of light

(C) Converging beam of light

(D) Both converging as well as diverging beam of light.

37. Which of the following optical instrument is fitted inside a camera ?

(A) Convex mirror (B) Concave mirror

(C) Convex lens (D) Concave lens

38. Which of the following image is formed by the eyelens ?

(A) Real and erect image (B) Real and inverted image

(C) Virtual and erect image (D) Virtual and inverted image.

39. Which of the following is not a primary cell ?

(A) Voltaic cell (B) Daniell cell

(C) Dry cell (D) Lead storage battery.

Space for rough work

40. Which of the following is not a liquid fuel ?

(A) Kerosene (B) Petrol

(C) Diesel (D) LPG.

41. Which of the following is a non-renewable source of energy ?

(A) Water (B) Wind

(C) Biogas (D) Coal.

42. Which of the following is a non-magnetic substance ?

(A) Iron (B) Nickel

(C) Cobalt (D) Copper.

43. Which of the following is not used in making of permanent magnets ?

(A) Copper (B) Aluminium

(C) Nickel (D) Cobalt.

44. The current in a metallic wire is due to the flow of

(A) Electrons (B) Protons

(C) Neutrons (D) Both electrons and neutrons.

45. Which of the following would you use as an objective to make a telescope ?

(A) Convex lens of focal length 200cm

(B) Convex lens of focal length 10cm

(C) Concave lens of focal length 100cm

(D) Concave lens of focal length 10cm.

Space for rough work

46. Which statements is correct :

(A) All minerals are ores
(B) A mineral cannot be an ore
(C) An ore cannot be a mineral
(D) All ores are minerals.

47. The nucleus of an atom contains :

(A) protons
(B) neutrons
(C) neutrons and protons
(D) Four protons and two electrons.

48. Mass number of atom represents the number of its :

(A) Protons only
(B) Protons and neutrons
(C) Protons and electrons
(D) Neutrons and electrons.

49. Metal are good coductor of :

(A) Electricity
(B) heat
(C) sound
(D) both (A) and (B).

50. $^{13}_{6}C$ and $^{12}_{6}C$ differ from each in respect of :

(A) electrons
(B) Protons
(C) Neutrons
(D) None of these.

51. Isotopes are the atoms of same element that have the :

(A) same number of protons and different number of neutrons
(B) same number of electrons and different number of protons
(C) same number of neutrons and different number of electrons
(D) same number of neutrons and different number of protons.

52. When chlorine atom becomes chloride ion it :

(A) loses an electron
(B) gains an electron
(C) electrostatic force
(D) magnetic force.

Space for rough work

53. Depletion of ozone layer takes place due to :

(A) methyl alcohol (B) benzene

(C) carbon tetrachloride (D) Chlorofluocarbons.

54. LPG mainly contains :

(A) butane + isobutane (B) propane + ethane

(C) butane + ethane (D) methane + ethane.

55. Combustion is a/an _____reaction.

(A) reduction (B) addition

(C) electrochemical (D) oxidation.

56. The number of electrons possessed by sodium ion [Na^+] is :

(A) 10 (B) 12

(C) 11 (D) 13.

57. Marsh gas has the chemical formula

(A) C_2H_2 (B) C_2H_4

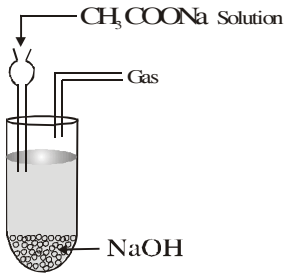
(C) CH_4 (D) C_6H_6

58. Oxides of metals are generally

(A) acidic (B) Basic

(C) Amphoteric (D) Neutral.

59. The gas formed in the given reaction is



(A) O_2 (B) CO_2

(C) CO (D) CH_4.

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60. Can we kept iron sulphate in copper container and why ?

(A) Yes, because copper is more reactive than iron

(B) No, because iron is more reactive than copper

(C) Yes, because copper is less reactive than iron

(D) No, because copper is more reactive than iron.

61. Food is synthesised by:

(A) Chloroplast (B) Mitochondria

(C) microtubules (D) porous membranes.

62. The vacuole of Amoeba is called:

(A) Food vacuole (B) Water vacuole

(C) vacuole (D) leucoplast

63. Robert Hooke while observing thin sections actually observed

(A) cork cells (B) cellulose

(C) nuclei (D) protoplasm

64. Which of the following is the largest cell ?

(A) bone cell (B) nerve cell

(C) Ostrich egg (D) all

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65. Which one takes part in providing energy?

(A) Nucleus (B) Mitochondria

(C) Lysosome (D) Golgi apparatus.

66. Nucleus is separated from surrounding cytoplasm by :

(A) a nuclear envelope (B) Mitochondria

(C) Lysosome (D) Golgi apparatus.

67. Some bacteria are not easily killed because of-

(A) Mesosomes (B) Chitinous wall

(C) Their tolerant power (D) Capsule and endospore formation

68. Choose the correct pair:

(A) Sericulture – Fish

(B) Silviculture – silkworm

(C) Apiculture – honeybee

(D) Pisciculture – foresty

69. Bacteria were discovered by :

(A) Linnaeus (B) Pasteur

(C) Robert Koch (D) Leeuwenhoek.

70. Who put forward 'Germ theory of disease'?

(A) Ivanowski (B) Stanley

(C) Koch (D) Pasteur.

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71. Bacteria occurs in :
(A) Soil only (B) Air only
(C) Water only (D) All of these.

72. Which is free living N_2 fixing bacteria?
(A) *Bacillus* (B) *Clostridium*
(C) *Streptomyces* (D) *Rhizobium.*

73. Main source of antibiotics is which bacteria.
(A) *Bacillus* (B) *Clostridium*
(C) *Streptomyces* (D) *Rhizobium.*

74. Which one of these is not correctly matched ?

(A) Cyanobacteria –– Blue green algae

(B) Diatom –– Virus

(C) Protozoa –– Holozoic nutrition

(D) Lichen –– Symbiosis.

75. AIDS virus may spread all over India due to
(A) No control on blood donors (B) No control on blood banks
(C) Drug abuse is on the increase (D) All the above.

Space for rough work

ANSWER
4 YEAR
Set-A

1.	**A**	**2.**	**C**	**3.**	**A**	**4.**	**D**	**5.**	**A**
6.	**B**	**7.**	**D**	**8.**	**C**	**9.**	**D**	**10.**	**B**
11.	**B**	**12.**	**A**	**13.**	**B**	**14.**	**B**	**15.**	**C**
16.	**B**	**17.**	**B**	**18.**	**C**	**19.**	**A**	**20.**	**B**
21.	**B**	**22.**	**A**	**23.**	**C**	**24.**	**A**	**25.**	**A**
26.	**C**	**27.**	**A**	**28.**	**B**	**29.**	**B**	**30.**	**A**
31.	**C**	**32.**	**C**	**33.**	**B**	**34.**	**D**	**35.**	**C**
36.	**A**	**37.**	**C**	**38.**	**B**	**39.**	**D**	**40.**	**D**
41.	**D**	**42.**	**D**	**43.**	**A**	**44.**	**A**	**45.**	**A**
46.	**D**	**47.**	**C**	**48.**	**B**	**49.**	**D**	**50.**	**C**
51.	**A**	**52.**	**B**	**53.**	**D**	**54.**	**A**	**55.**	**D**
56.	**A**	**57.**	**C**	**58.**	**B**	**59.**	**D**	**60.**	**B**
61.	**A**	**62.**	**A**	**63.**	**A**	**64.**	**C**	**65.**	**B**
66.	**A**	**67.**	**D**	**68.**	**C**	**69.**	**D**	**70.**	**C**
71.	**D**	**72.**	**D**	**73.**	**C**	**74.**	**B**	**75.**	**D**