

MOTION OPEN SCHOLARSHIP TEST

SESSION - 2020-21

MOVING CLASS : 9th

SAMPLE PAPER

CANDIDATE'S NAME : _____

DURATION: 90 MINUTES

TOTAL QUESTIONS: 60

MAXIMUM MARKS : 120

INSTRUCTION:

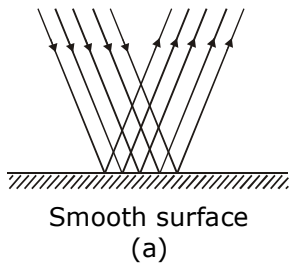
- The paper consists of Five sections :- Science (30 Questions), Mathematics (10 Questions), Social Studies (10 Questions), English (5 Questions) and Mental ability (5 Questions).
- All questions are compulsory and carry 2 marks each.
- There is only one correct answer hence mark one choice only.
- Darken your choice in OMR Sheet with Blue/ Black Ball Point Pen.
- Return the OMR Sheet to the invigilator at the end of the exam.

SCIENCE

- As we go higher up on mountains, our ears pop because
(A) Air pressure outside our ears increases
(B) The pressure exerted by the blood near ears increases
(C) Air pressure outside our ears decreases
(D) None of these
- When we press the bulb of a dropper with its nozzle kept in water, air in the dropper is seen to escape in the form of bubbles. Once we release the pressure on the bulb, water gets filled in the dropper. The rise of water in the dropper is due to :
(A) Pressure of water
(B) Gravity of the earth
(C) Shape of rubber bulb
(D) Atmospheric pressure
- Complete the passage using the suitable words given in option below.
A rough surface will offer a (i) frictional force than a smooth surface. The heavier the object, the (ii) will be the frictional force. Friction is a (iii) force.

	(i)	(ii)	(iii)
(A)	Lower	Greater	Resistive
(B)	Greater	Lower	Contact
(C)	Greater	Greater	Contact
(D)	Lower	Lower	Resistive
- To form an image twice the size of the object, using a convex lens of focal length 20 cm, the object distance must be -
(A) < 20 cm
(B) > 20 cm
(C) < 20 cm and between 20 cm and 40 cm
(D) Cannot say

5. Which of the following describes the process occurring in the figure (a)?



- (A) Refraction
(B) Diffuse reflection
(C) Regular reflection
(D) Total internal reflection
6. When monochromatic light passes from vacuum to a material medium and vice versa; which of the following characteristics of light beam does not change?
(A) velocity (B) intensity
(C) wavelength (D) frequency
7. A car approaches a hill with constant speed. When it is at a distance of 0.96 km from the hill, it blows horn whose echo is heard by the driver 6 second later. If the speed of sound in air is 300 m/s, calculate the speed of the car.
(A) 100 m/s (B) 20 m/s
(C) 50 m/s (D) 70 m/s
8. A boy sitting in a boat fires a gun. An observer P is at a distance of 50 m from the boat. Another observer Q is a diver, who is 50 m under water. Both hear the sound of gun:
(A) P hears the sound first
(B) Q hears the sound first
(C) Both P and Q hear the sound at the same time
(D) none of the above.
9. Which is not the condition for hearing sound?
(A) There must be a vibrating body capable of transferring energy.
(B) There must be a material medium to pick up and propagate energy
(C) The medium must have a large density.
(D) There must be receiver to receive the energy and interpret it.

10. Which of the following is the correct match?
(A) The smallest planet of the solar system- Venus
(B) A galaxy - Group of planets
(C) Not visible from the northern hemisphere- Pole star
(D) Rotates from east to west- Venus
11. Which one of the following properties would you consider when choosing a material for food containers?
(i) Able to resist high temperatures
(ii) A good insulator of heat
(iii) Non-corrosive
(iv) Can be made into various shapes
(A) (i) and (iv) only
(B) (ii) and (iii) only
(C) (i), (ii) and (iv) only
(D) All of the above
12. PVC is used for making rain coats and seat covers because
(A) It can be rolled into thin sheets like polythene
(B) it can be coated on a cloth base and is tougher than polythene
(C) it has low melting point and is unreactive
(D) it has high melting point and is very reactive
13. Which is the strongest fibre amongst the following?
(A) Rayon (B) Nylon
(C) Acrylic (D) Cotton
14. Non- metals do not conduct electricity because
(A) they have free electrons
(B) they do not have free electrons
(C) they are electron donors
(D) they are electron acceptors
15. When steam is passed through zinc then
(A) zinc oxide is formed
(B) zinc hydroxide is formed
(C) HCl is formed
(D) H₂O is formed

- 16.** Copper sulphate solution can be safely kept in a container made of
 (A) aluminium (B) lead
 (C) silver (D) zinc
- 17.** Most of the hydrocarbons from petroleum are obtained by
 (A) fractional distillation
 (B) simple distillation
 (C) destructive distillation
 (D) vaporisation
- 18.** Water gas is a mixture of
 (A) $\text{CO} + \text{N}_2$ (B) $\text{CO} + \text{H}_2$
 (C) $\text{CO} + \text{CO}_2$ (D) $\text{CO} + \text{N}_2 + \text{H}_2$
- 19.** Burning of LPG is
 (A) incomplete combustion
 (B) rapid combustion
 (C) slow combustion
 (D) none of these
- 20.** Fire extinguishers extinguish the fire by
 (A) cutting of the supply of air
 (B) bringing down the temperature of fuel
 (C) supplying air to the fuel
 (D) both (A) and (B)
- 21.** Which of the following is not a traditional method of irrigation?
 (A) Chain pump (B) Rahat
 (C) Moat (D) Sprinkler
- 22.** Which of the following is the smallest microorganism?
 (A) Alga (B) Bacterium
 (C) Protozoan (D) Virus
- 23.** Dodo is a/an
 (A) critically endangered species
 (B) extinct species
 (C) endangered species
 (D) vulnerable species
- 24.** The organization that maintains red data book is
 (A) IUCN (B) WWF
 (C) UNESCO (D) MEF
- 25.** Which cell organelle other than nucleus contains DNA?
 (A) Lysosome
 (B) Golgi bodies
 (C) Endoplasmic reticulum
 (D) Mitochondria
- 26.** Which among the following is a storage organelle-
 (A) Mitochondria (B) Leucoplast
 (C) Chloroplast (D) Ribosome
- 27.** Rupturing of follicles and discharge of ova is known as
 (A) copulation (B) conjugation
 (C) ovulation (D) oviposition
- 28.** The animal having separate male and female individuals are called
 (A) bisexual (B) hermaphrodite
 (C) unisexual (D) all of these
- 29.** In human beings, blood sugar level is controlled by
 (A) Adrenaline (B) Estrogen
 (C) Insulin (D) Thyroxine
- 30.** Which of the following is not due to air pollution?
 (A) Thinning of the ozone layer
 (B) Increase in the number of diabetic patients
 (C) Destruction of habitats
 (D) Global warming

MATHS

- 31.** A number is 56 greater than the average of its third, quarter and one-twelfth. Find the number.
(A) 85 (B) 64
(C) 72 (D) 40
- 32.** The sum of the additive inverse and multiplicative inverse of $\frac{1}{5}$ is _____
(A) $\frac{24}{5}$ (B) $-\frac{24}{5}$
(C) 25 (D) -25
- 33.** The product of two rational numbers is $-\frac{28}{81}$. If one of the numbers is $\frac{14}{27}$, then find the other number.
(A) $\frac{2}{5}$ (B) $\frac{8}{17}$
(C) $-\frac{2}{3}$ (D) $-\frac{4}{3}$
- 34.** If $\frac{1}{3}$ of a number is 10 less than the original number, then the number is _____.
(A) 30 (B) 15
(C) 10 (D) 27
- 35.** If the diagonals of a quadrilateral bisect each other at right angle, then it is a _____.
(A) Kite (B) Parallelogram
(C) Rhombus (D) Rectangle
- 36.** The number of sides of a regular polygon whose each exterior angle has a measure of 30° is _____.
(A) 12 (B) 6
(C) 8 (D) 10
- 37.** Square numbers can have _____ at the end.
(A) Odd number of zeroes
(B) Even number of zeroes
(C) Both (A) and (B)
(D) None of these

- 38.** The product of two numbers is 1296. If one number is 16 times the other, find the numbers
(A) 9, 144 (B) 8, 128
(C) 12, 192 (D) None of these
- 39.** How many cubes of side 2 cm can be packed in a cubical box with inner side equal to 4 cm?
(A) 6 (B) 4
(C) 8 (D) 2
- 40.** Find the smallest natural number by which 1458 must be divided so that the quotient is a perfect cube.
(A) 4 (B) 2
(C) 6 (D) 8

SOCIAL STUDIES

- 41.** The National Archives of India came up in the _____
(A) 1920s (B) 1930s
(C) 1940s (D) 1950s
- 42.** Which of the following is correct?
(A) The police cannot file an FIR on a cognizable offence.
(B) The judge cannot decide whether a person is guilty or innocent.
(C) The police cannot torture anyone during his/her investigation
(D) The police can give punishment for petty offences
- 43.** The Bhopal gas tragedy took place on _____
(A) 10th October, 2002
(B) 2nd December, 1986
(C) 2nd November, 2004
(D) 4th December, 1985
- 44.** A ghetto is an area/locality populated by _____
(A) poor people
(B) members of a particular community
(C) malnourished people
(D) displaced people

45. Who presents the budget?
 (A) President (B) Prime Minister
 (C) Finance Minister (D) Opposition Party
46. The High Court of Delhi came up in
 (A) 1950 (B) 1952
 (C) 1966 (D) 1970
47. Which of the following countries has slow growth rate of population.
 (A) Russia (B) Brazil
 (C) Australia (D) United Kingdom
48. is an important steel city of the United States of America.
 (A) New York (B) Pittsburgh
 (C) Washington (D) Scranton
49. The High Court of Madras was established in
 (A) 1970 (B) 1962
 (C) 1955 (D) 1862
50. Leading producer of coffee is
 (A) Brazil (B) India
 (C) Russia (D) China

ENGLISH

51. The house was painted _____ John.
 (A) by (B) on
 (C) for (D) from
52. The robber was wearing mask _____ the face.
 (A) on (B) at
 (C) over (D) off
53. Find the 'reciprocal pronoun'.
 (A) each-other (B) who
 (C) whomever (D) others

54. I myself was present at the accident site. Tell the name of underlined pronoun.
 (A) Reflexive pronoun
 (B) Emphatic pronoun
 (C) Relative pronoun
 (D) Possessive pronoun
55. He told me _____ I had cooked food.
 (A) that (B) if
 (C) what (D) whether

MENTAL ABILITY

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



- (A) (B) (C) (D)

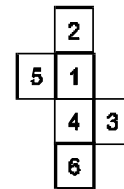
Answer Figures:



- (1) (2) (3) (4)

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

57. Which of the following dices is identical to the unfolded figure as shown here ?



- (A) (B)
 (C) (D)

- 58.** Pointing to a photograph, a person says to his friend, .She is the grand-daughter of the elder brother of my father. How is the girl in the photograph related to the man ?
(A) Niece (B) Sister
(C) Aunt (D) Sister-in-law
- 59.** In a certain code, REFRIGERATOR, is coded as ROTAREGIRFER. Which word would be coded as NOITINUMMA ?
(A) ANMOMIUTNI (B) AMNTOMUIIN
(C) AMMUNITION (D) NMMUNITIOA
- 60.** Find the missing term.
9, 25, 46, 73, 107, ____
(A) 133 (B) 149
(C) 148 (D) 145

ROUGH WORK