1. Which of the gas is not known as green house gas?

   (a) Methane

   (b) Nitrous oxide

   (c) Carbon dioxide

   (d) Hydrogen

2. The hardest substance available on earth is

   (a) Gold

   (b) Iron

   (c) Diamond

   (d) Platinum

3. Which instrument is used to measure altitudes?
(a) Audiometer
(b) Ammeter
(c) Altimeter
(d) Anemometer

4. Name of the instrument to measure atomspheric pressure ?
(a) Barometer
(b) Barograph
(c) Bolometer
(d) Callipers

5. Which instrument is used to measure the power of electric circuit ?
(a) Voltmeter
(b) Wattmeter
(c) Wavemeter
(d) Viscometer

6. Which instrument is used to measure changes in volume of substances ?
(a) Dyanamo
(b) Dilatometer
(c) Cyclotron
(d) Electroscope

7. Which instrument is used to measure heat radiation ?
(a)Radar
(b) Salinometer
(c) Refractometer
(d) Radio micrometer

8. Alexander Graham Bell invented
(a) Telephone
(b) Telescope
(c) Television
(d) Tank

9. Nuclear sizes are expressed in a unit named
(a) Fermi
(b) Angstrom
(c) Newton
(d) Tesla

(10) A planet in a distant solar system is 10 times more massive than the earth and its radius is 10 times smaller. Given that the escape velocity from the earth is 11 kms−1, the escape velocity from the surface of the planet would be

(a) 1.1 kms−1
(b) 11 kms−1
(c) 110 kms−1
(d) 0.11 kms−1

11. The dimension of magnetic field in M, L, T and C (Coulomb) is given as

(a) MLT−1C−1
(b) MT2C−2
(c) MT−1C−1
(d) MT−2C−1

12. Consider a uniform square plate of side 'a' and mass 'm'. The moment of inertia of this plate about an axis perpendicular to its plane and passing through one of its corners is

(a) 4/6 ma2
(b) 3/4 ma2
(c) 2/3 ma2
(d) 1/5 ma2

13. A body of mass m = 3.513 kg is moving along the x-axis with a speed of 5.00 ms−1. The magnitude of its momentum is recorded as

(a) 17.6 kg ms−1
(b) 17.565 kg ms−1
(c) 17.56 kg ms−1
(d) 17.57 kg ms−1

14. An experiment is performed to find the refractive index of glass using a travelling microscope. In this experiment distance are measured by

(a) a vernier scale provided on the microscope
(b) a standard laboratory scale
(c) a meter scale provided on the microscope
(d) a screw gauage provided on the microscope

15. A particle of mass 100 g is thrown vertically upwards with a speed of 5 m/s. the work done by the force of gravity during the time the particle goes up is

(a) 0.5 J
(b) −0.5 J
(c) −1.25 J
(d) 1.25 J

16. A material 'B' has twice the specific resistance of 'A'. A circular wire made of 'B' has twice the diameter of a wire made of 'A'. Then for the two wires to have the same resistance, the ratio A / B of their respective lengths must be

(a) 2
(b) 1/2
(c) 4
(d) 1/3

17. In a region, steady and uniform electric and magnetic fields are present. These two fields are parallel to each other. A charged particle is released from rest in this region. The path of the particle will be a

(a) circle
(b) helix
(c) straight line
(d) ellipse

18. A player caught a cricket ball of mass 150 g moving at a rate of 20 m/s. If the catching process is completed in 0.1 s, the force of the blow exerted by the ball on the hand of the player is equal to

(a) 300 N
(b) 150 N
(c) 3 N
(d) 30 N

19. The current I drawn from the 5 volt source will be

(a) 0.17 A
(b) 0.33 A
(c) 0.5 A
(d) 0.67 A

20. A thermocouple is made from two metals, Antimony and Bismuth. If one junction of the couple is kept hot and the other is kept cold then, an electric current will

(a) flow from Antimony to Bismuth at the cold junction
(b) flow from Antimony to Bismuth at the hot junction
(c) flow from Bismuth to Antimony at the cold junction
(d) not flow through the thermocouple

ANSWER KEY

1d

2c

3c

4a

5b

6b

7d

8a

9a

10c

11c

12c

13a

14a

15c

16a

17c

18d

19c

20a