G.M.S.S.S. Lakhan Majra

Max Time : 3 hr **Class = 9th** **Max Marks : 80**

Subject = Science

Final Term Examination

Section – A

Q.1 Multiple choice questions : [1 X 20 = 20]

1) Chromosomes are made up of :
   a) DNA b) Protein c) DNA & protein d) RNA

2) In solid, liquid and gas the interparticle spaces increase in the order:
   a) liquid > gas > solid b) solid > liquid > gas c) gas > solid > liquid d) none

3) Fats are stored in human body as :
   a) Cuboidal epithelium b) Adipose tissue c) Bones d) Cartilage

4) Nerve cell does not contain :
   a) Axon b) Nerve endings c) Tendons d) Dendrites

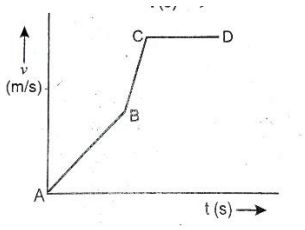
5) Retardation is expressed in :
   a) m b) ms^{-1} c) $-ms^{-2}$ d) ms^{-2}

6) Skeleton tissue comprises:
   a) Tendons and ligaments b) Bones and cartilage
   c) Blood and lymph d) All of these

7) The boiling point of diethyl ether , acetone and n-butyl alcohol are 35℃ , 56℃ and 118℃ respectively. Which one of the following correctly represents their boiling points in kelvin scale?
   a) 306 K , 329 K , 391 K b) 308 K , 329 K , 392 K
   c) 308 K , 329 K , 391 K d) 329 K , 392 K , 308 K

8) Which condition out of the following would increase the evaporation of water?
   a) Increase in temperature of water b) Decrease in temperature of water
   c) Less exposed surface area of water d) Adding common salt to water

9) The velocity time graph of a moving particle is shown in figure. The acceleration is maximum for segment:



   a) AB b) BC c) CD d) equal for all parts

10) Two bodies of equal masses move with velocities v and 3 v respectively. The ratio of their kinetic energies is :
   a) 1 : 3 b) 3 : 1 c) 9 : 1 d) 1 : 9

11) A body of mass 2 kg is moving over a perfectly smooth surface with a uniform velocity of 5 m/s. Find the linear momentum of the body.
   a) zero b) 10 kg m/s c) 2.5 kg m/s d) none

12) A particle executes one and a half revolution along a circle of radius 1 m. The displacement of the particle is

a) zero b) 1 m c) 2 m d) 3 m

13) The tissues mainly concerned with the transportation of water and inorganic solutes are :

a) Collenchyma b) Sclerenchyma c) Xylem d) Phloem

14) In desert plants, rate of water loss get reduced due to the presence of :

a) Cuticle b) Stomata c) Lignin d) Suberin

15) How many daughter cells are formed in meiosis?

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

Fill in the Blanks :

16) The particles of matter continuously keep on _____ and hence possess _____ energy.

17) The arrangement of particles in _____ is highly ordered , less ordered in _____ but there is no order in _____.

18) The intermixing of particles of two different types of matter on their own is called _____.

19) The interparticle forces of attraction is _____ in solids , _____ in liquids and _____ in gases.

20) Diffusion occurs fastest in _____ than in _____ while it does not occur in _____.

Section – B [1 x 10 = 10]

Q.2 Define Sublimation.

Q.3 Define 1 newton.

Q.4 When a carpet is beaten with a stick, dust come out of it. Explain.

Q.5 Define Newtons second laws of motion

Q.6 What is green manure.

Q.7 What is kinetic energy of an object?

Q.8 Why do we see water droplets on outer surface of glass containing ice cold water.

Q.9 Why lysosomes called as suicidal bag of the cell?

Q.10 Differentiate between tendons and Ligaments.

Q.11 Why does the temperature remains constant during changing of state.

Section – C [2 x 10 = 20]

Q.12 Differentiate between Micronutrients and macronutrients.

Q.13 What is Epithelial Tissue? Write its Functions.

Q.14 Why it is difficult to hold a school bag having a strip made up of thin and strong string?

Q.15 Write the electronic configuration of : (a) Potassium (b) Sodium.

Q.16 A solution contains 40 gm of common salt in 360 gm of water. Calculate the concentration in terms of mass by mass percentage.

Q.17 Differentiate between RER and SER.

Q.18 State the importance of Universal law of gravitation.

Q.19 Define (a) Positive work (b) Negative work

Q.20 Write the range of frequency of (i) Infrasonic (ii) Ultrasonic

Q.21 Write down the postulates of cell theory.

Section – D [3 x 5 = 15]

Q.22 Differentiate between RBC , WBC and platelets.

Q.23 Calculate the Molar mass of : (a) NH_2CONH_2 (b) H_2SO_4 (c) $CaCl_2$.

Q.24 Differentiate between Mixture and Compound.

Q.25 Find the pressure exerted on skin of balloon with a force of 2.1 N using: (a) Your finger (b) a needle. Assume the area of your finger tip is 1×10^{-4} m^2, and the area of needle tip is 2.5×10^{-7} m^2. (c) Find the maximum force necessary to burst the balloon with the needle, given that the balloon bursts with a pressure of 3×10^5 N/m^2

Q.26 (i) A 5 kg ball is dropped from a height of 10 m.

(a) Find the initial potential energy of the ball.

(b) Find the kinetic energy just before it reaches the ground.

(c) Calculate the velocity before it reaches the ground

(ii) An electric heater is rated 1500 W. How much energy does it use in 10 hours?

Section – E [5 x 3 = 15]

Q.27 (a) A bus starting from rest moves with a uniform acceleration of 0.1 m/s^2 for 2 minutes. Find the speed acquired and the distance travelled.

(b) A force of 5 N gives a mass m_1, an acceleration of 10 m/s^2 and a mass m_2 , an acceleration of 20 m/s^2. What acceleration would it give if both the masses were tied together.

Q.28 Write the electrons , Protons and Neutrons in the following species:

(a) N^{3-} (b) Mg^{2+} (c) O (d) Ar (e) H^{-1}

Q.29 (a) Define three laws of newtons.

(b) Differntiate between manure and fertilizers.