

KENDRIYA VIDYALAYA VIJAYAPURA
Model Paper -1(2019-20)
(Half yearly)

SUBJECT: SCIENCE;

CLASS: IX;

M.M.; 80;

TIME: 3Hr

General Instructions: -

1. All questions are compulsory.
2. Question number 1 to 20 are very short answer questions, and carry 1 marks each.
3. Question number 21 to 30 are short answer questions of 3 marks each.
4. Question numbers 31 to 36 are long answer questions of 5 marks each.

QUESTIONS:

SECTION A

1. Which of the following has highest kinetic energy? 1
 - (a) Particles of ice at 0 °C
 - (b) Particles of water at 0 °C
 - (c) Particles of water at 100 °C
 - (d) Particles of steam at 100 °C

2. Mixture can be 1
 - (a) homogeneous
 - (b) heterogeneous
 - (c) Both (a) and (b)
 - (d) pure substance

- 3) Which of the following is a wrong Combination? 1
 - I. 6.022×10^{23} molecules of oxygen = 32g of oxygen
 - II. 6.022×10^{23} ions of sodium = 23g of sodium
 - III. 6.022×10^{23} atoms of C = 24g of carbon
 - IV. 6.022×10^{23} atoms of H = 1g of hydrogen atoms

- 4) When a body covers unequal distances in equal intervals of time, it is said to be in 1
 - (a) linear motion
 - (b) uniform motion
 - (c) non-uniform motion
 - (d) vibratory motion

- 5) The ball is thrown up, the value of 'g' will be 1
 - a. Zero
 - b. Positive
 - c. Negative
 - d. Negligible

- 6) The structural and functional unit of life is 1
 - a) Cell
 - b) tissue
 - c) organ
 - d) organ system

- 7) The cell body of a nerve cell is known as _____. 1
 - a) Axon
 - b) siton
 - c) dendrite
 - d) nucleus

- 8) A pathogen carrying insect is known as 1
 - a) Radar
 - b) vector
 - c) order
 - d) none

- 9) Skeletal muscles are 1
 a) Voluntary b) involuntary c) neither d) either
- 10) The tissue that helps in translocation of food is 1
 a) Xylum b) phloem c) cambium d) none
- 11) Which property of cotton makes it suitable for use as clothing in summer? 1
- 12) What is meant by chromatography? 1
- 13) Define valency and give valency of copper and iron. 1
- 14) Define average speed. 1
- 15) Earth attracts apple from the tree and it falls on it but the earth does not move towards the apple. Why? 1
- 16) Give a difference between hypotonic and isotonic solutions. 1
- 17) Give a difference between simple permanent tissue and complex permanent tissue. 1
- 18) What is a tissue? 1
- 19) Give an example each for an acute and chronic disease. 1
- 20) What do you mean by binomial nomenclature? 1

SECTION B

- 21) How can you show that evaporation causes cooling? 3
 Or
 i) What is Latent Heat of Fusion?
 ii) Define latent heat of Vaporization?
- 22) What is Tyndall effect? 3
- 23) What is the relationship between mole, Avogadro number and mass? 3
 Or
 State the Law of conservation of mass and the Law of constant proportion with examples.
- 24) (a) Define uniform acceleration. What is the acceleration of a body moving with uniform velocity?
 (b) A particle moves over three quarters of a circle of radius r . What is the magnitude of its displacement? 3
- 25) Why do you fall in the forward direction when a moving bus brakes to a stop and fall backwards when it accelerates from rest? 3
- 26) A stone is released from the top of a tower of height 19.6 m. Calculate its final velocity just before touching the ground? 3
- 27) Draw a prokaryotic cell and label its parts. 3
- 28) Write any three features of meristematic tissue. 3
 OR
 Write any three features of cardiac muscle tissue
- 29) What is the principle of immunization? Who is the father of immunization? 3
- 30) Draw the flow chart of Plant division. 3

SECTION C

- 31) Which separation techniques will you apply for the separation of the following? 5
- Sodium chloride from its solution in water.
 - Ammonium chloride from a mixture containing sodium chloride and ammonium chloride.
 - Small pieces of metal in the engine oil of a car.
 - Different pigments from an extract of flower petals.
 - Butter from curd.
 - Oil from water.
 - Tea leaves from tea.

- (h) Iron pins from sand.
- (i) Wheat grains from husk.
- (j) Fine mud particles suspended in water.

Or

Explain the following giving examples:

- (a) Saturated solution
- (b) Pure substance
- (c) Colloid
- (d) Suspension
- (e) Heterogeneous solutions

- 32) a) How can you show that evaporation causes cooling? 5
b) Camphor disappears without leaving any residue. Explain?

- 33) Joseph jogs from one end A to the other end B of a straight 300 m road in 2 minutes 30 seconds and then turns around and jogs 100 m back to point C in another 1 minute. What are Joseph's average speeds and velocities in jogging (a) from A to B and (b) from A to C? 5

Or

A ball is gently dropped from a height of 20 m. If its velocity increases uniformly at the rate of 10 m s^{-2} , with what velocity will it strike the ground? After what time will it strike the ground?

- 34) Two objects each of mass 1.5 kg, are moving in the same straight line but in opposite directions. The velocity of each object is 2.5 ms^{-1} before the collision during which they stick together. What will be the velocity of the combined object after collision? 5

Or

An object of mass 100 kg is accelerated uniformly from a velocity of 5 ms^{-1} to 8 ms^{-1} in 6 s. Calculate the initial and final momentum of the object. Also, find the magnitude of the force exerted on the object.

- 35) a) Bring out any three differences between a plant and an animal cell. 5
b) Name the process by which amoeba obtains its food.
c) Name the stain used to mount an onion cell.

OR

- a) Bring out any three difference between prokaryotic and eukaryotic cell.
- b) Give an example each for a prokaryotic and a eukaryotic cell.

- 36) a) Write short notes on blood tissue. 5
b) Draw a nerve cell and label its parts.

***** ALL THE BEST *****