

PONDA SCHOOL'S ASSOCIATION

FIRST TERMINAL EXAMINATION OCTOBER, 2018

STD : IX

Sub : SCIENCE

Marks : 65

Date : 31-10-2018

Seat No : _____.

Time : 2 1/2 hrs

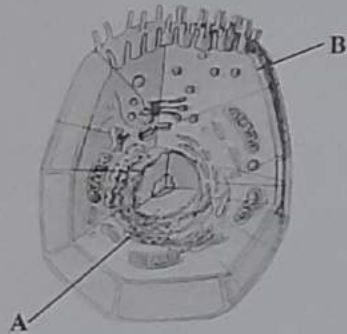
-
- Q. 1. A** i) **Select and write the most appropriate alternatives from those given below.** (1)
- a) The medium having exactly the same water concentration as the cell is known as _____
- * Hypertonic solution
 - * Hypotonic solution
 - * Isotonic solution
 - * Mesotonic solution
- b) The component within a cell which performs specific function is called _____
- * cell wall
 - * organelle
 - * nucleus
 - * plasma membrane
- ii) **Define plasmolysis.** (1)
- iii) **Give one word for the following.** (1)
- A) Functional segments of DNA.
 - B) The fluid content inside the plasma membrane.
- B** i) **Convert the following temperatures.** (1)
- A) 173°C to Kelvin Scale.
 - B) 825 K to Celsius Scale.

ii) The flexibility of the cell membrane enables the cell to engulf in food from external environment. (1)

- A) Name the process
 B) Write an example of an organism which acquires its food through such process.

iii a) Where are genes located in the cell? (1)
 b) Distinguish between chromoplast and leucoplast (1 point) (1)

C i) Observe the diagram given below and answer the following question. (2)



- A) Name the parts marked as 'A' and 'B'.
 B) State the function of part marked 'A'.

ii) Attempt the following:- (3)

- A) Naphthalene balls disappear without leaving any solid. Give reason.
 B) State any one function of vacuoles in plants.
 C) What would happen if the plasma membrane ruptures?

iii) Gases are highly compressible. (1)

What makes gases more compressible?

Q.2 A i) Select and write the most appropriate alternatives from those given below: (1)

- a) Mass per unit volume of substance is called _____
 * density * weight * pressure * length
 b) Dry ice is solid _____
 * Oxygen * Nitrogen * Helium * Carbondioxide

ii) Distinguish between solid state and liquid state with reference to spacing between the particles. (1)

iii) Match the column. (1)

Column A	Column B
1) Distance	a) Galvanometer
2) Speed	b) Odometer
	c) Speedometer

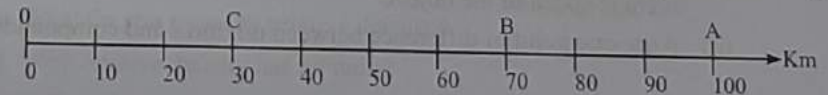
B i) A car starts from rest with uniform acceleration of 0.5m/s^2 . (2)

- A) What will be its velocity when it has travelled a distance of 25m?
 B) What is the time required to cover this distance?

ii) Attempt the following. (2)

- a) State one point of similarity between speed and velocity.
 b) When is acceleration taken to be positive?

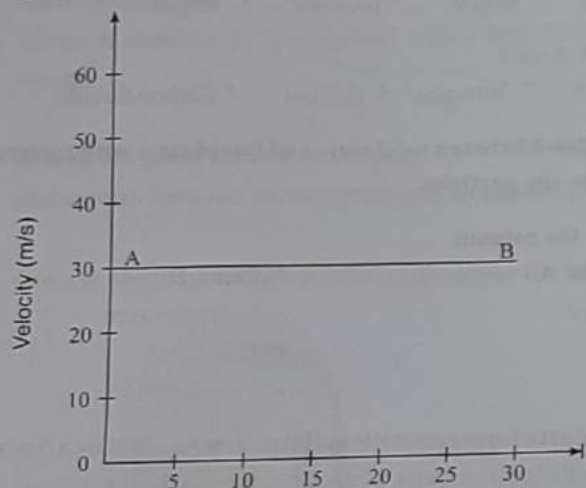
iii) In the following figure, OA is a straight line path. 'C' and 'B' are the points on it. The object starts from 'B' moves to 'C' and then from 'C' to 'A'. With reference to the figure, answer the following questions. (3)



- A) What is the total distance travelled by the object?
 B) What is the displacement of the object?
 C) If the object travels from 'O' to 'A' with uniform speed of 20 km/hr. Calculate the time taken.

OR

- iii) Observe the velocity time graph of an object and answer the following questions below: (3)



- A) What type of motion does AB represent? (1)
B) What is the velocity of the object in 25 sec.? (1)
C) How much is the distance travelled by the object in 15 sec if its acceleration is 2 m/s^2 ? (1)
- C.
- Write any one use of graph. (1)
 - An object travels 50 m in 6 seconds and another 40 m in 3 seconds. Find average speed of the object. (1)
 - Write one point of difference between mixtures and compounds. (1)
- Q.3
- A) Select and write the most appropriate alternatives from those given below. (1)
- a) The first scientist to use the term 'element' was _____.
* Robert Hooke * Robert Boyle * Robert Brooke * Robert Gayle

- b) The only non-metal in a liquid state is _____.
* Chlorine * Fluorine * Iodine * Bromine

ii) Name the following. (1)

- A) Instrument used to determine purity of milk.
B) The scientist who found the value of 'G'.

iii) Write any one application of centrifugation. (1)

B

i) Attempt the following. (2)

- A) How does thrust differ from pressure?
B) State Archimedes principle.

ii) The weight of a wooden block in air is 29.4 N. Calculate its mass. (1)

iii) Draw a neat labelled diagram of separating funnel and label. (2)

- * Separating funnel * stopcock

C

i) The moon exerts lesser force of attraction on the objects. Why? (1)

ii) Buildings have wide foundations. Give reason. (1)

iii) The density of a substance is one of its characteristic property. (2)

A) What do you mean by relative density?

B) Why relative density has no units?

iv) A solution contains 40 g of sugar in 300 g of water. Calculate the concentration in terms of mass by mass percentage of the solution. (1)

Q. 4 A i) Select and write the most appropriate alternatives from those given below. (1)

a) The epithelial tissue that is present in linings of kidney tubules is _____.

* Columnar * Ciliated * Cuboidal * Glandular

b) The tissue present in aquatic plants which helps them to float is _____.

* Chlorenchyma * Aerenchyma * Collenchyma * Sclerenchyma

ii) Why do plants growing in dry regions have thick epidermis? (1)

iii) a) Draw a neat labelled diagram of longitudinal section of parenchyma tissue and label. (2)

* Cytoplasm * Vacuoles

b) What does xylem consist of? (1)

OR

iii) a) Draw a neat labelled diagram of nerve cell and label. (2)

* dendrite * cell body

b) Voluntary muscles are also known as skeletal muscles. Give reason. (1)

B i) The brain, spinal chord and nerves are all composed of nervous tissue. (2)

a) State the function of cells of nervous tissue.

b) Write one point of difference between axon and dendrite. (1)

ii) Most of the farmers plough their fields in summer, give reason. (1)

C i) Bone is a type of connective tissue. (2)

a) Name the two minerals present in bone.

b) State any one function of bone. (1)

ii) Epidermal tissue does not have intercellular space. Give reason. (1)

iii) Attempt the following : (2)

A) What is the effect of two balanced forces acting on a body? (1)

B) Why does the momentum of uniformly accelerated body increase constantly?

Q.5. A i) Select and write the most appropriate alternative from those given below. (1)

A) The inertia of an object is measured by its _____.

* weight * mass * volume * size

B) The net force applied on a body is proportional to _____.

* velocity of body * mass of body * change of momentum * acceleration of body

ii) Attempt the following. (3)

A) Write an example of Newton's Third Law of Motion.

B) A force of 40 N produces an acceleration of 5ms^{-2} on a body. Find the mass of body,

C) It is recommended not to jump out of a moving bus. Give reason.

iii) a) Students of Std. IX were playing with a cricket ball in the campus. Their teacher told them about the accident that could happen and advised them to play with tennis ball.

Why is it safer to play with tennis ball and not with cricket ball? (1)

b) A gun of mass 5 kg fires a 50 g bullet with a velocity of 200 m/s. Calculate the recoil velocity of the gun. (1)

c) Certain experiences that we come across while travelling in a car can be explained on the basis of law of inertia. (2)

a) State Newton's 1st law of motion.

b) What is inertia?

- B** i) Observe the correlation in first pair and complete the second pair : (1)
- A) Wheat : Baking quality :: pulses : _____
- B) Drought animals : farm labour :: Milch animals : _____
- C** i) Poultry farming is undertaken to raise domestic fowl for egg production and chicken meat. (2)
- A) Name an indigenous and a foreign variety of fowls.
- B) Write any one way to prevent poultry fowl disease.
- II a)** Write any one advantage of check dams. (1)
- b) Modern farming practices can destroy the soil by killing the micro-organisms. Give reason. (1)

THE END