



# G-W CLASSES, GONDIA

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## GW PARIKSHA-IX (01) SET A

**CLASS-IX**

**SUBJECT-SCIENCE**

**TIME ALLOWED: 3 HRS**

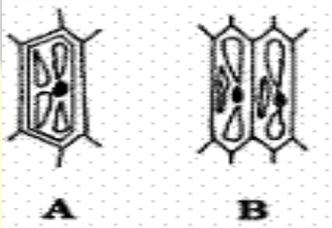
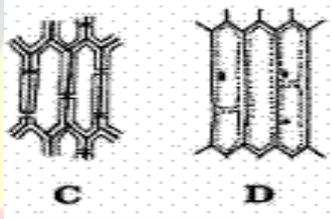
**MAX. MARKS : 80**

### GENERAL INSTRUCTIONS:

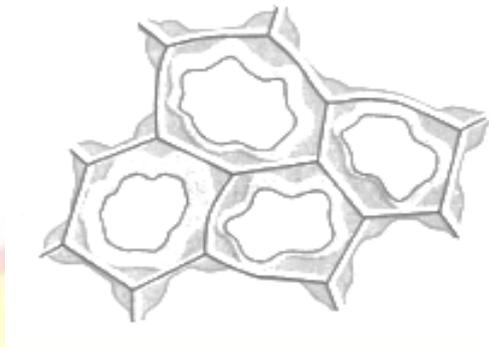
1.This question paper consists of 39 questions in 3 sections. Section A is Biology, Section B is Chemistry and Section C is Physics.

2.All questions are compulsory. However, an internal choice is provided in some questions.

A student is expected to attempt only one of these questions.

<b>SECTION A</b>										
1	<p>While observing a thin section of a plant stem, four students sketched sclerenchyma as given below. The correct diagram is:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><b>A</b>      <b>B</b></p> </div> <div style="text-align: center;">  <p><b>C</b>      <b>D</b></p> </div> </div> <p>a) C                      b) A                      c) D                      d) B</p>	<b>[1]</b>								
2	<p>The structure/organelle of a cell that functions as a passage for intracellular transport as well as a manufacturing surface is:</p> <p>a) plastids                      b) ribosome c) endoplasmic reticulum      d) plasma membrane</p>	<b>[1]</b>								
3	<p>Match the following with the correct response :</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="padding: 5px;">(a) Genes</td> <td style="padding: 5px;">(i) Gases</td> </tr> <tr> <td style="padding: 5px;">(b) Diffusion</td> <td style="padding: 5px;">(ii) Loss of water by plant cells</td> </tr> <tr> <td style="padding: 5px;">(c) Osmosis</td> <td style="padding: 5px;">(iii) Movement of water molecular</td> </tr> <tr> <td style="padding: 5px;">(d) Plasmolysis</td> <td style="padding: 5px;">(iv) Hereditary units</td> </tr> </tbody> </table> <p>a) (a) - (ii), (b) - (iv), (c) - (i), (d) - (iii)      b) (a) - (iv), (b) - (i), (c) - (iii), (d) - (ii) c) (a) - (iii), (b) - (ii), (c) - (iv), (d) - (i)      d) (a) - (i), (b) - (iii), (c) - (ii), (d) - (iv)</p>	(a) Genes	(i) Gases	(b) Diffusion	(ii) Loss of water by plant cells	(c) Osmosis	(iii) Movement of water molecular	(d) Plasmolysis	(iv) Hereditary units	<b>[1]</b>
(a) Genes	(i) Gases									
(b) Diffusion	(ii) Loss of water by plant cells									
(c) Osmosis	(iii) Movement of water molecular									
(d) Plasmolysis	(iv) Hereditary units									

4	Choose the wrong statement a) Epithelial tissues have intercellular spaces between them b) Cells of striated muscles are multinucleate and unbranched c) Fats are stored below the skin and in between the internal organs d) The nature of matrix differs according to the function of the tissue	[1]
5	Some species of fish can be cultured in a single fish pond. These fish do not compete for food as they have different food habits. In the following options fish are paired with their food habits. Select the incorrect match. a) Common carp - Surface feeder      b) Cirrhinus mrigala - Bottom feeder c) Labeo rohita - Column feeder      d) Catla catla - Surface feeder	[1]
6	<b>Assertion (A):</b> Squamous epithelial tissue consists of cube - like cells. <b>Reason (R):</b> They form the delicate lining of cavities (mouth, esophagus, nose, etc.) and blood vessels. a) Both A and R are true and R is the correct explanation of A. b) Both A and R are true but R is not the correct explanation of A. c) A is true but R is false.      d) A is false but R is true.	[1]
7	<b>Assertion (A):</b> RBC's kept in a hypotonic solution will swell. <b>Reason (R):</b> Movement of water occurs from outside to inside the cell. a) Both A and R are true and R is the correct explanation of A. b) Both A and R are true and R is not the correct explanation of A. c) A is true and R is false.      d) A is false and R is true.	[1]
8	What is the role of the epidermis in the plants?	[2]
9	What happens when cell is placed in - (a) Hypertonic solution (b) Hypotonic solution (c) Isotonic solution  <b>OR</b>  Draw a neat diagram of plant cell and label any three parts which differentiate it from an animal cell.	[2]
10	How is the use of manure beneficial for our environment?	[2]
11	1. Identify the tissue given in the following figure. 2. Mention the characteristic features of the cells. 3. Specify the function of this tissue. 4. Name any one part of the plant, where these cells are present.	[3]

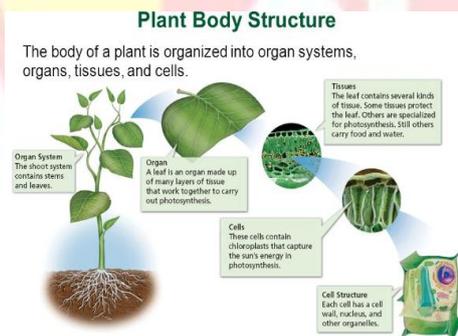


12 Answer the following questions: [3]

1. Fertilizers have short term benefits but long term use of it is harmful. Explain.
2. What are the uses of fertilizers?
3. What is the major problem of using fertilizers in a high dose?

13 **Read the following text carefully and answer the questions that follow:** [4]

Plants are stationary or fixed they don't move. Since they have to be upright, they have a large quantity of supportive tissue. The supportive tissue generally has dead cells. Animals, on the other hand, move around in search of food, mates and shelter. Another difference between animals and plants is in the pattern of growth. The growth of plants occurs only in certain specific regions. New cells produced by meristem are initially like those of meristem itself, but as they grow and mature, their characteristics slowly change and they become differentiated as components of other tissues. The girth of the stem or root increases due to lateral meristem (cambium). Cells of meristematic tissue are very active, lack vacuoles.



1. What is meristematic tissue, Mention the types of meristematic tissue? (1)
2. Identify A in the given figure. (1)



(1) Canal rays consist of positively charged particles protons	(A) Rutherford
(2) Electrons are distributed in shells	(B) J.J.Thomson
(3) Centre of an atom is dense	(C) J.Dalton
(4) Atom is indivisible	(D) Neils Bohr

a) 1 - B, 2 - D, 3 - A, 4 - C

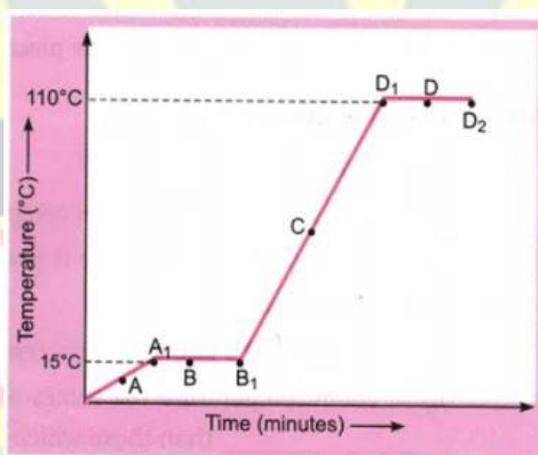
b) 1 - C, 2 - B, 3 - D, 4 - A

c) 1 - D, 2 - A, 3 - C, 4 - B

d) 1 - A, 2 - C, 3 - B, 4 - D

- 19 Two samples X and Y of a pure substance obtained by two different methods contain elements P and Q. Substance X has a mass of 2.25 g and contains 0.90 g of Q. Substance Y is made up of 60% P and 40% Q by weight. This is an illustration of
- a) Law of constant proportions                      b) Law of conservation of mass  
c) Law of simple proportion                        d) Law of multiple proportions

- 20 The temperature - time graph given alongside shows the heating curve for pure wax. [1]



What is the boiling point of the substance?

a) 100°C

b) 110°C

c) 9°C

d) 15°C

- 21 Arun has prepared 0.01% (by mass) solution of sodium chloride in water. Which of the following correctly represents the composition of the solutions? [1]
- a) 0.01g of NaCl + 99.99g of water                      b) 0.11g of NaCl + 100g of water  
c) 0.10 g of NaCl + 99.90g of water                      d) 1.00g of NaCl + 100g of water

- 22 **Assertion (A):** Atoms of a few elements exist in the free state. [1]  
**Reason (R):** Most elements, being chemically reactive exist as molecules or ions.  
a) Both A and R are true and R is the correct explanation of A.

	<p>b) Both A and R are true but R is not the correct explanation of A.</p> <p>c) A is true but R is false. <span style="margin-left: 150px;">d) A is false but R is true.</span></p>	
23	Which postulate of Dalton's atomic theory is the result of the law of conservation of mass?	[2]
24	<p>Differentiate between homogeneous and heterogeneous mixtures with examples.</p> <p style="text-align: center;"><b>OR</b></p> <p>The melting point of a solid when determined experimentally comes out to be <math>160^{\circ}\text{C}</math>. But its actual melting point is <math>150^{\circ}\text{C}</math>. Predict the nature of the solid.</p>	[3]
25	<p>What information do you get from the figure about the atomic number, mass number and valency of atoms X, Y and Z?</p> <p>Give your answer in a tabular form.</p> <div style="text-align: center;"> </div>	[3]
26	<p><b>Read the following text carefully and answer the questions that follow:</b></p> <p>Matter around us exists in three different states—solid, liquid and gas. These states of matter arise due to the variation in the characteristics of the particles of matter. Solids have a tendency to maintain their shape when subjected to outside force. Solids may break under force but it is difficult to change their shape, so they are rigid. the difference in various states of matter is due to the difference in the distances between the constituent particles. Pressure and temperature determine the state of a substance, whether it will be solid, liquid or gas.</p> <div style="text-align: center;"> </div> <p>1. Write the properties of solid state of matter? (1)</p> <p>2. How does solid gets converted directly into gaseous states of matter? Give examples of such substances (1)</p> <p>1. What is Latent heat of vaporization? How it is related to cooling (2)</p>	[4]

**OR**

Differentiate between Evaporation and Cooling. Also Give an example from which we can say that gas can directly converted into solid state of matter? (2)

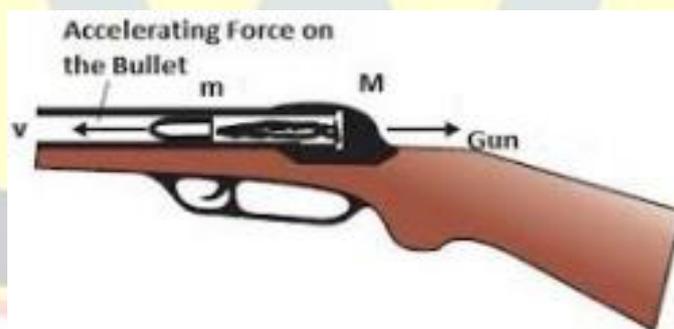
27 Enlist the conclusions drawn by Rutherford from his  $\alpha$  - ray scattering experiment. [5]

**OR**

Atomic number	Mass number	Number of neutrons	Number of protons	Number of electrons	Name of the atomic species
9	-	10	-	-	-
16	32	-	-	-	Sulphur
-	24	-	12	-	-
-	2	-	1	-	-
-	1	0	1	0	-

**SECTION C**

28 The image shows the firing of a gun. What happens when a gun is fired? [1]



- a) Exerts a forward force on the arm      b) Exerts a backward force on the bullet  
c) Exerts a forward force on the bullet      d) Exerts a backward force on the arm

29 On tripling the speed of motion of a body, the change in K.E. is: [1]  
a) 9 times      b) 8 times      c) 2 times      d) 4 times

30 Which of the following is a false statement? [1]  
A. The body can have a constant velocity and still have a varying speed.  
B. The body can have zero velocity and still be accelerated.  
C. The body can have a constant speed and still have varying velocity  
D. The direction of the velocity of a body can change when its acceleration is constant.  
a) (A)      b) (B)      c) (D)      d) (C)

31 The density of tap water is less than that of sea water. If an object is immersed completely in both one by one, its loss in weight will be : [1]

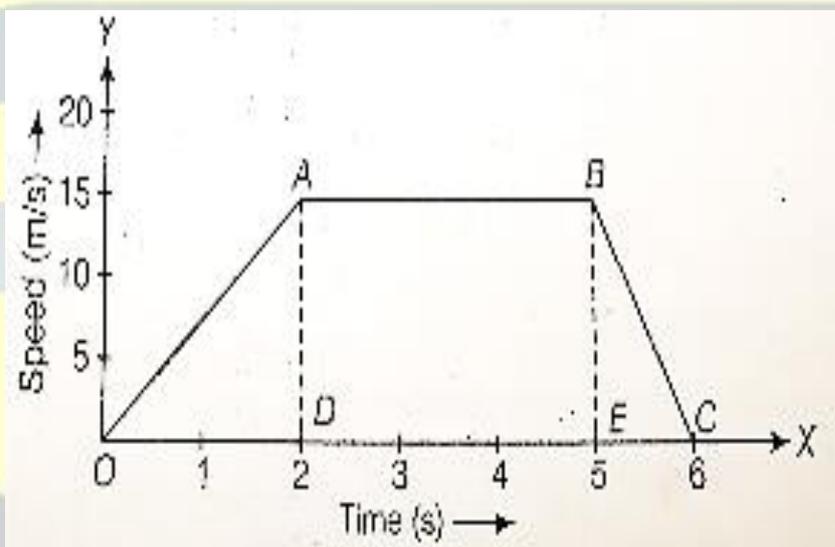


- A. Identify the characteristics of the two graphs as shown above in the given figure.
- B. What is the relationship between the velocity of sound, its wavelength, and frequency?
- C. What is the term for the magnitude of the maximum disturbance in the medium on either side of the mean value?
- D. Give the unit of frequency?

37 The speed - time graph of a car is given. The car weighs 1000 kg.

[3]

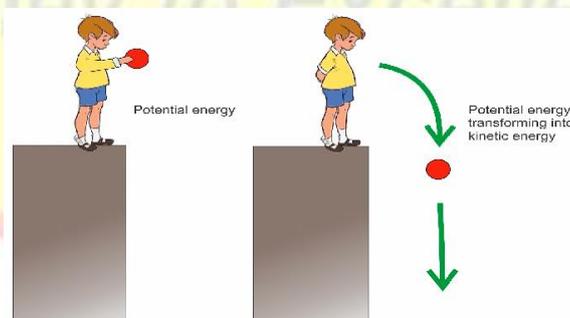
- A. What is the distance travelled by car in the first 2s?
- B. What is the braking force applied at the end of 5 s to bring the car to stop within one second?



38 **Read the following text carefully and answer the questions that follow:**

[4]

**Potential energy** is stored energy that depends upon the relative position of various parts of a system. Spring has more potential energy when it is compressed or stretched. A steel ball has more potential energy raised above the ground than it has after falling to Earth.



- A. If a mass of 10 kg is dropped from a height of 50 cm, then find potential energy just before dropping. (1)
- B. If a mass of 10 kg is dropped from a height of 50 cm, then what is kinetic energy just on touching the ground? (1)

