

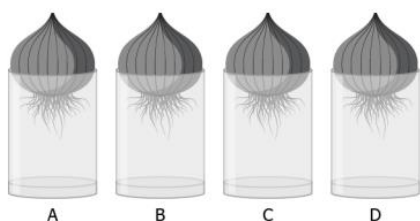
INDIAN SCHOOL AL WADI AL KABIR
DEPARTMENT OF SCIENCE 2021 - 22
Class-IX-SCIENCE
MIDTERM SCIENCE QUESTION PAPER
SET II

SL.NO	QUESTIONS
	MULTIPLE CHOICE QUESTIONS
1	<p>One of the following substances is neither a good conductor of electricity nor an insulator. This substance is:</p> <ul style="list-style-type: none">(a) Chromium(b) Germanium(c) Gallium(d) Potassium
2	<p>Which of the following are non-metals?</p> <ul style="list-style-type: none">(i) Oxygen(ii) Carbon(iii) Aluminium(iv) Gold <ul style="list-style-type: none">(a) (i) and (iii)(b) (ii) and (iii)(c) (i) and (ii)(d) (i), (ii) and (iii)
3	<p>On the basis of composition of matter, air is considered to be:-</p> <ul style="list-style-type: none">(a) A pure substance(b) An impure substance(c) An element(d) A compound
4	<p>On passing electricity through a substance P, it separates to give two substances X and Y. X and Y cannot be broken down into simpler substances by simple chemical reactions. Which of the following statements concerning X, Y and P are correct?</p> <ul style="list-style-type: none">(i) P is a compound

- (ii) X and Y are compounds
 - (iii) X and Y are elements
 - (iv) P has a fixed composition
- (a) (i), (ii) and (iii)
 - (b) (i), (ii) and (iv)
 - (c) (ii), (iii) and (iv)
 - (d) (i), (iii) and (iv)

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A student did an experiment to study the role of meristematic tissue in onion roots. For the experiment, an onion was kept in each of the four glasses that were filled with same amount of water.



The student measures the length of the roots in all the glasses on day 3. The student then cuts about 1 cm of the onion roots in glass B, C, and D every next day and measures the length of the root on day 10. The table shows the result of the experiment.

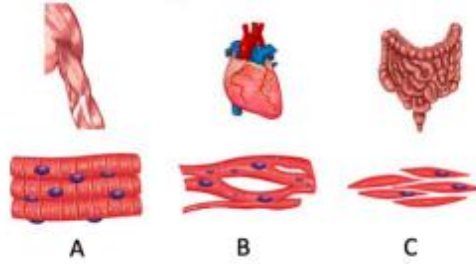
Glass	Root Length Day 3 (cm)	Day on which Onion was Root Cut	Length of Root on Day 10 (cm)
A	2.0	-	6.0
B	2.0	Day 4	1.0
C	2.0	Day 5	3.5
D	2.0	Day 6	5.0

What can the student conclude from the experiment?

- a) Roots develop meristematic tissue again when cut.
- b) Roots grow faster after meristematic tissue is removed.
- c) Roots stops growing when meristematic tissue is removed.
- d) Roots with and without meristematic tissue had same growth.

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The image shows the structure of different types of tissues.



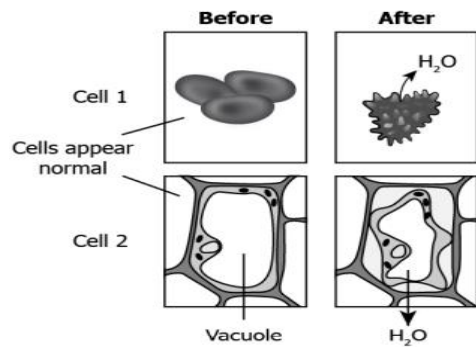
Which function is likely performed by the tissue B?

- a) movement of body
- b) rapid movement of iris of the eye
- c) contraction and relaxation of heart
- d) downward movement of food in the alimentary canal

Ans: c) contraction and relaxation of heart

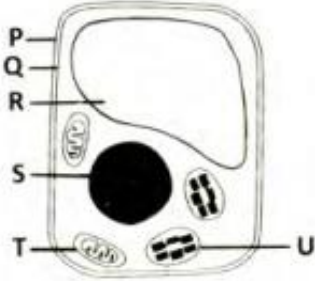
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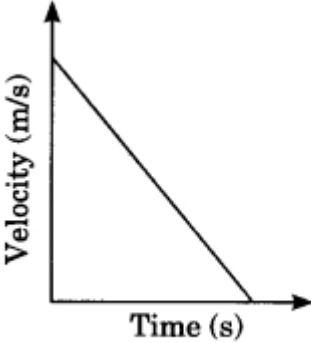
The image shows how the two cells appear before and after placing in a hypertonic solution. Based on the behaviour of the cell, identify the cell types?



- a) Cell 1: animal cell, Cell 2: plant cell
- b) Cell 1: bacterial cell, Cell 2: plant cell
- c) Cell 1: Plant cell, Cell 2: animal cell
- d) Cell 1: animal cell, Cell 2: bacterial cell

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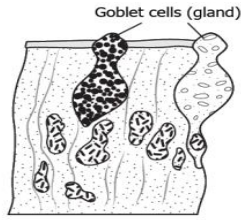
	<p>Which labelled organelles helped Ravi to conclude that given diagram is a plant cell?</p>  <p>a) P and R only b) P and S only c) P, R and T only d) P, R and U only</p>
9	<p>Besides nucleus, DNA is also present in</p> <p>a) ribosome's and Golgi apparatus b) mitochondria and chloroplasts c) lysosomes and endoplasmic reticulum d) Golgi complex and mitochondria</p>
10	<p>What is the function of the central vacuole in plants?</p> <p>a) Stores water and dissolved nutrients b) Carries out photosynthesis c) Releases energy from stored nutrients d) Protects the genetic material of the cell</p>
11	<p>In which of the following cases of motion, the distance moved and the magnitude of displacement are equal?</p> <p>a) If the car is moving on straight road b) If car moving in circular path c) The pendulum is moving to and fro d) The earth is revolving around earth.</p>
12	<p>A batsman hits a cricket ball which then rolls on a level ground. After covering a short distance, the ball comes to rest. The ball slows to a stop because</p> <p>(a) the batsman did not hit the ball hard enough. (b) velocity is proportional to the force exerted on the ball.</p>

	<p>(c) there is a force on the ball opposing the motion. (d) there is no unbalanced force on the ball, so the ball would want to come to rest.</p>
13	<p>Newton's first law introduces the concept of -----</p> <p>a) Momentum b) Inertia c) Conservation of energy d) Action and reaction</p>
14	<p>Velocity-time graph of an object is given below. The object has</p> <div style="text-align: center;">  <p>The graph shows Velocity (m/s) on the vertical axis and Time (s) on the horizontal axis. A straight line starts at a point on the vertical axis and slopes downwards to meet the horizontal axis, representing a constant negative acceleration.</p> </div> <p>(a) Uniform velocity (b) Uniform speed (c) Uniform retardation (d) Variable acceleration</p>
<p>ASSERTION-REASON TYPE QUESTIONS</p> <p>Directions: In each of the following questions, a statement of Assertion is given and a corresponding statement of Reason is given just below it. Of the statements, given below, mark the correct answer as:</p> <p>(a) Both assertion and reason are true and reason is the correct explanation of assertion. (b) Both assertion and reason are true but reason is not the correct explanation of assertion. (c) Assertion is true but reason is false. (d) Assertion is false but Reason is true</p>	
15	<p>Assertion:- Constituents of a compound cannot be separated by simple physical methods. Reason:- A compound is heterogeneous in nature.</p>
16	<p>Assertion:-A mixture has a fixed melting point. Reason:- The properties of a mixture are the same as the properties of its constituents.</p>

17	<p>Assertion:- Milk is considered as an impure substance (ie, a mixture) Reason:- A mixture is one which contains two or more different kinds of particles.</p>
18	<p>Assertion: The endoplasmic reticulum which lacks ribosomes is called smooth endoplasmic reticulum (SER). Reason: SER is mainly involved in protein synthesis.</p> <p>a) Both A and R are true and R is the correct explanation of the assertion. b) Both A and R are true but R is not the correct explanation of the assertion. c) A is true but R is false. d) A is false but R is true.</p>
19	<p>Assertion: Vascular or conductive tissue is a distinctive feature of complex plants. Reason: Vascular tissue has made survival of complex plants possible in terrestrial environment.</p> <p>a) Both A and R are true and R is the correct explanation of the assertion. b) Both A and R are true but R is not the correct explanation of the assertion. c) A is true but R is false. d) A is false but R is true.</p>
20	<p>Assertion: Most of plant tissues are dead. Reason: Due to sedentary existence of plants, dead cells provide mechanical strength more easily than live ones and need less maintenance.</p> <p>a) Both A and R are true and R is the correct explanation of the assertion. b) Both A and R are true but R is not the correct explanation of the assertion. c) A is true but R is false. d) A is false but R is true.</p>
21	<p>Assertion: An object may have acceleration even if it is moving with uniform speed. Reason: An object may be moving with uniform speed but it may be changing its direction of motion.</p>
22	<p>Assertion : The speed of a body can be negative Reason : If the body is moving in the opposite direction of positive motion, then its speed is negative.</p>
23	<p>Assertion: Some of the leaves may get detached from a tree if we vigorously shake its branch.</p>

	Reason: The branch attains motion but leaves tends to stay at rest due to inertia.
	<p style="text-align: center;">CASE STUDY BASED QUESTION-1</p> <p>There are some changes during which no new substances are formed. On the other hand, there are some other changes during which new substances are formed. So, on the basis of whether new substances are formed or not, we can classify all the changes into two groups: physical changes and chemical changes. In a physical change, the substances involved do not change their identity. Chemical changes are also known as chemical reactions.</p>
24	<p>Which one of the following is not a chemical change?</p> <p>(a) Formation of curd (b) Ripening of banana (c) Corrosion of iron gate (d) Boiling of water</p>
25	<p>Which of the following are physical changes?</p> <p>(i) Melting of iron metal (ii) Rusting of iron metal (iii) Bending of an iron rod (iv) Drawing a wire of iron metal</p> <p>(a) (i), (ii) and (iii) (b) (i), (ii) and (iv) (c) (i), (iii) and (iv) (d) (ii), (iii) and (iv)</p>
26	<p>Physical changes are:</p> <p>(a) Temporary, reversible and a new substance is produced (b) Always accompanied by exchange of light (c) Permanent, irreversible and a new substance is produced (d) Temporary, reversible and no new substance is formed.</p>
27	<p>Which of the following are chemical changes?</p> <p>(i) Decaying of wood (ii) Burning of wood (iii) Sawing of wood (iv) Hammering of nail into wood</p> <p>(a) (i) and (ii) (b) (ii) and (iii) (c) (iii) and (iv)</p>

	(d) (i) and (iv)
28	<p>The rusting of an iron object is called:</p> <p>(a) Corrosion and it is a physical change (b) Dissolution and it is a physical change (c) Corrosion and it is a chemical change (d) Dissolution and it is a chemical change.</p> <p>Epithelial tissue is the simplest tissue. Epithelium covers most organs and cavities within the body. It also forms a barrier to keep different body systems separate. The skin, the lining of the mouth, the lining of blood vessels, lung alveoli and kidney tubules are all made of epithelial tissue. Epithelial tissue cells are tightly packed and forms a continuous sheet. They have only a small amount of cementing material between them and almost no intercellular spaces. These cells are permeable. This makes it possible for them to exchange materials between different parts of the body and also between the body and the external environment. Epithelial tissue may be simple, i.e. composed of single layer of cells or stratified, i.e. Made up of several layers of cells. Different epithelia show differing structures that correlate with their unique functions. Simple squamous epithelium is present in cells, lining blood vessels or lung alveoli. In Skin, epithelial cells are arranged in many layers to prevent wear and tear. Since they are arranged in a pattern of layers, the epithelium is called stratified squamous epithelium. Where absorption and secretion occur, as in the inner lining of the intestine, tall epithelial cells are present. In the respiratory tract, the columnar epithelial tissue also has cilia, which are hair-like projections on the outer surfaces of epithelial cells. These cilia can move, and their movement pushes the mucus forward to clear it. This type of epithelium is thus ciliated columnar epithelium. Epithelial cells often acquire additional specialisation as gland cells which can secrete substances at the epithelial surface.</p>
29	<p>Skin is the outermost layer of the body which provide protection from mechanical injuries as well as help in secretion of sweat and oils. Which type of epithelium is the skin likely composed of to facilitate all the mentioned functions?</p> <p>a) epithelium having flat surface b) epithelium arranged in many layers c) epithelium with irregular shaped cells d) epithelium with hair-like projections for particle movement</p>
30	The image shows the structure of a specialised epithelium.



What will be the likely function of this epithelium?

- a) secretion of substances
- b) protection from wear and tear
- c) restrict movement of the tissue
- d) transport of substances across permeable surface

31

Which of the following tissues is present in kidney tubules?

- a) Squamous epithelium
- b) Cuboidal epithelium
- c) Columnar epithelium
- d) Compound epithelium

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The type of epithelial tissues which consists of layers of flat cells is

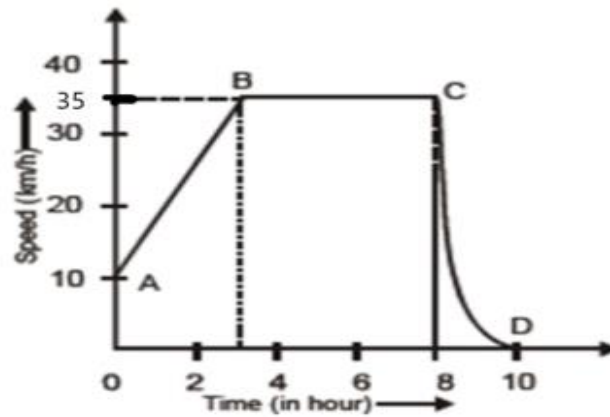
- a) cuboidal epithelium
- b) stratified squamous epithelium
- c) squamous epithelium
- d) columnar epithelium

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The type of epithelial tissues present in bronchi and trachea is

- (a) squamous epithelium
- (b) columnar epithelium
- (c) ciliated columnar epithelium
- (d) cuboidal epithelium

The graph given alongside shows how the speed of a car changes with time.



34	<p>What is the initial speed of the car?</p> <p>a) 35 km/h b) 10 km/h c) 8km/h d) 0km/h</p>
35	<p>What is the maximum speed attained by the car?</p> <p>a) 10km/h b) 35km/h c) 0 km/h d) 20km/h</p>
36	<p>Which part of the graph shows zero acceleration?</p> <p>a) AB b) BC c) CD d) A to C</p>
37	<p>Which part of the graph shows varying retardation?</p> <p>a) AB b) AC c) BD d) CD</p>
38	<p>Find the distance travelled in first 8 hours.</p> <p>a. 242.5 km b. 175 km c. 67.5 km d. 410km</p>

	NUMERICAL BASED MCQ
39	<p>The average speed of a bicycle, an athlete and a car are 18km/h , 7 m/s , and 2 km/min respectively. Which of the three is the fastest and which is the slowest?</p> <p>a. The car is fastest and the bicycle is the slowest b. The car is the slowest and the bicycle is fastest. c. An athlete is the fastest bicycle is the slowest d. The car is fastest and an athlete is the lowest</p>
40	<p>An athlete completes one round of a circular track of diameter 200 m in 40 s. What will be the distance covered and the displacement at the end of 2 minutes 20 s respectively?</p> <p>(a)3500m,100m (b)2200m,200m (c)1000m,200m (d)1500m,100m</p>

ANSWERS

1.b	2. c	3. b	4. d	5.c	6.c	7.a	8.d
9. b	10. a	11. a	12. c	13. b	14. c	15. c	16.d
17. a	18. c	19. a	20. a	21. a	22. d	23.a	24. d
25. c	26.d	27.a	28.c	29.b	30.a	31.b	32.b
33.c	34.b	35.b	36.b	37.d	38. a	39.a	40.b

CHECKED BY : HOD - SCIENCE
