

# INTERNATIONAL INDIAN SCHOOL BURAIDAH

23/09/23.

Biology worksheet.

Chapter 6.

Class 9

## Assertion and Reason Questions for Class 9 Science Chapter 6 Tissues

**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:

- (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) Both Assertion and Reason are false.

**Q.1. Assertion :** Parenchyma cells help in storage of food.

**Reason :** Parenchyma cells are the main seats of photosynthesis.

Answer: (b) Both assertion and reason are true but reason is not the correct explanation of assertion.

The functions of the parenchymatous tissue is store food material in the form of starch, proteins, oils and fats. The parenchymatous tissues in root and stem tubers are good examples. The xylem and phloem parenchyma also store starchy food. The parenchymatous cells that contain chloroplasts are the main seats of photosynthesis, e.g., palisade cells of leaf.

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**Q.2. 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.

Answer: (b) Both assertion and reason are true but reason is not the correct explanation of assertion.

Xylem and phloem are vascular tissues that conduct water, minerals and food to various parts of plants. Vascular tissue is a distinctive feature of the complex plants, one that has made their survival in terrestrial environment possible.

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**Q.3. Assertion :** The inner lining of intestine has tall epithelial cells.

**Reason :** Columnar epithelium facilitates absorption and secretion.

Answer: (a) Both assertion and reason are true and reason is the correct explanation of assertion.

Where absorption and secretion occur, such as in the inner lining of the intestine, tall epithelial cells or columnar epithelium is present. This epithelium facilitates movement or diffusion across the epithelial barrier.

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**Q.4. Assertion :** Permanent tissue is composed of mature cells.

**Reason :** Meristematic tissue is a group of actively dividing cells.

Answer: (b) Both assertion and reason are true but reason is not the correct explanation of assertion.

A meristematic tissue is a group of cells that are in a continuous state of division or retain their power of division. Permanent tissues are composed of mature cells that, after undergoing complete growth, have assumed a definite shape, size and function and have temporarily or permanently lost the power of division.

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**Q.5. 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.

Answer: (a) Both assertion and reason are true and reason is the correct explanation of assertion.

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**Q.6. Assertion :** Ciliated epithelium helps in movement of particles.

**Reason :** Cilia help in movement.

Answer: (a) Both assertion and reason are true and reason is the correct explanation of assertion.

The function of the cilia is to move particles, free cells or mucus in a specific direction. It is present in inner surfaces of some hollow organs such as Fallopian tubes, bronchioles and small bronchi and help in movement of the particles present there. Thus, the function of ciliated epithelium (as it possesses cilia) is the movement of particles.

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**Q.7. Assertion :** Meristematic tissues constitute the major portion of the plant body.

**Reason :** Meristematic tissues consist of differentiated cells.

Answer: (d) Both Assertion and Reason are false.

Meristematic tissues, after differentiation, give rise to permanent tissues. These constitute the major portion of the plant body.

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**Q.8. Assertion :** Surface of skin is impervious to water.

**Reason :** Surface of skin is covered by stratified cuboidal epithelium.

Answer: (c) Assertion is true but reason is false.

Surface of skin is impervious to water because it is covered by stratified keratinized squamous epithelium. This epithelium has many superficial layers of horny, scale- like remains of dead squamous cells and several deeper layers of

living polygonal cells. Heavy deposits of the insoluble protein keratin are present in the dead superficial layers which makes this epithelium impervious to water. Stratified cuboidal epithelium, on the other hand, lines the inner surface of sweat gland, large salivary and pancreatic ducts.

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**Q.9. Assertion :** Lateral meristems add thickness of plants.

**Reason :** Lateral meristems divide only in one plane.

Answer: (a) Both assertion and reason are true and reason is the correct explanation of assertion.

Lateral meristems are present along the side of the stem. Vascular cambium in the gymnosperms and the angiosperms is a good example of lateral meristems.

Lateral meristem is always composed of a single layer of rectangular cells that divide only in one plane and produce new vascular tissues on either side.

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**Q.10. Assertion :** Vessel and sieve tube both are meant for transport purposes.

**Reason :** Vessels are lignified.

Answer: (b) Both assertion and reason are true but reason is not the correct explanation of assertion.

Vessel is a long distance channel for water transport. Sieve tube is a long distance channel for transport of organic nutrients. The wall of vessel is lignified.

Lignification is absent in sieve tubes.

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