

Biology - 12th Class Biology Chapter 19 Short Questions Preparation

Q1. Explain embryonic induction.

Ans 1: Capacity of some cells to induce a specific developmental response in other cells is wide spread phenomena, this is called embryonic induction.

Q2. What is open growth? Discuss.

Ans 1: Plants have growth pattern called open growth which means throughout life plants add new organs such as branches, leaves and roots, enlarging from the tip of roots and shoots.

Q3. What are apical meristems?

Ans 1: These are the cells which are capable of cell division and are involved in the primary growth of plants.

Q4. Give the effect of temperature on plant growth.

Ans 1: Normal rate of growth increases with rise of temperature and decrease with decrease in temperature. For maximum growth the optimum temperature is 25 to 30°C and it is least at 5-10°C. But at very high temperature 35 to 40°C the rate of growth stops and plant may dies.

Q5. Define apical and intercalary meristem.

Ans 1: Apical meristem: Apical meristem found at the tips of shoot and root. The cells of apical meristem has ability to divide throughout plant life. These are basically related to extension of plant body.

Ans 2: Intercalary meristem: These are the part of apical meristem which get separated from apex by permanent tissues. They are situated at the base of internode. They play important role in production of leaves and flowers.

Q6. Differentiate between growth and development.

Ans 1: Growth: Increase in size of an organism is called growth. It is an irreversible change.

Ans 2: Development: Different changes occur during the life of an organism is called development.

Q7. What are the internal factors which affect the process of growth?

Ans 1: internal factors which are involved in plant growth are hormones, water, nutrition, vitamins.

Q8. How are opaca differs from area pellucida?

Ans 1: Area pellucida: Central cells of blastoderm can be separated from yolk and giving the area of translucent appearance called Area pellucida.

Area opaca: The peripheral part of blastoderm where the cells are unseparated from the yolk is called area opaca.

Q9. Differentiate between epiblast and hypoblast.

Ans 1: Epiblast: During gastrulation blastoderm splits into two layers, an upper layer of cells is called epiblast.

Hypoblast: Lower layer of cells is called hypoblast.

Q10. How do quantity and quality of light effect plant growth?

Ans 1: Light plays important role in the growth of plants:

Quality of light: The red light favors elongation of cells and blue light enhances cell division but retards cell enlargement. Similarly ultraviolet rays also retard cell elongation.

Quantity of light: Duration of light affects the growth vegetative & reproductive structures. It also plays a role in inducing or suppressing flowering. The phenomenon is termed as photoperiodism.
