

Botany (Hons.) Paper-IV

Answer five questions, selecting at least one from each group. Q.No. 1 is compulsory.

1. Tick out correct answer of the following :
- (a) Casparian bands (strips) are the characteristic features of :
(i) Epidermis (ii) Epiblema (iii) Exodermis (iv) Endodermis
 - (b) Passage cells are the features of :
(i) Epidermis (ii) Endodermis (iii) Pericycle (iv) V. Bundle
 - (c) Which of the following is living ?
(i) Vessels (ii) Sieve tubes (iii) Companion cells (iv) Phloem fibres
 - (d) Meiosis occurs in angiosperm when :
(i) Flowers are formed (ii) Seeds are formed
(iii) Pollengrains are formed (iv) Cells grow vegetatively
 - (e) The most common type of Ovule in angiosperm is :
(i) Orthotropous (ii) Anatropous (iii) Circinotropous
(iv) Hemianatropous LNMUonline.com
 - (f) Translator apparatus is found in :
(i) Asclepiadaceae (ii) Malvaceae (iii) Poaceae (iv) Droseraceae
 - (g) Embryosac represents :
(i) Megasporangium (ii) Megaspore (iii) Female gamete (iv) Female gametophyte
 - (h) Edible oil is obtained from the endosperm of :
(i) Coconut (ii) Mustard (iii) Ground nut (iv) Soyabean
 - (i) Jute is obtained from :
(i) Primary phloem (ii) Primary xylem
(iii) Secondary Phloem (iv) Secondary xylem
 - (j) Quiescent centre is present in :
(i) Root apex (ii) Shoot apex (iii) Vegetative apex (iv) Reproductive apex

Group-A

- 2. What is Meristem ? Describe the shoot apex organisation in plants.
- 3. Give an account of environmental adaptations of halophytes.
- 4. Describe the anomalies found in secondary growth of *Boerhaavia* or *Tecoma*.

Group-B

- 5. With the help of diagrammatic sketches, describe the development of female gametophyte in angiosperm.
- 6. Elaborate the contrivances of cross pollination in bisexual flowers.
- 7. What is Microsporogenesis ? Describe the process involved in the formation of pollen grains and dehiscence of anthers.

Group-C

- 8. What are the characteristics of good fire wood ? Write botanical names of any five good fire wood of your locality.
- 9. What is Biogas ? Mention the steps in its production and effective management.
- 10. Write short notes on any three of the following :
(a) Jajoba (b) Petroplants/Petrocrops
(c) Cotton seed oil (d) Cereals of Indian Origin
(e) Timber Yielding Plants of Bihar