



JAX-BOT-313

Seat No. _____

M. Sc. (Botany) (Sem. III) (CBCS)

(W.E.F. 2016) Examination

December – 2019

BOT - 313 : Plant Anatomy, Morphogenesis & Embryology

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

1 Answer the following : (any seven) **7×2=14**

- (a) Write the characteristic features and function of parenchyma cells.
- (b) What are apical and lateral meristems ? Give its function.
- (c) Explain Histogen theory of root apex organization.
- (d) What is chemical vernalization ?
- (e) What is photothermal induction ?
- (f) What is aleurone tissue ? Give its function.
- (g) What are antipodal cells and synergids ?
- (h) Give major types of diplospory.
- (i) What is organogenesis ?
- (j) What is nucellus ? Give its function.

2 Answer the following: (any two) **7×2=14**

- (a) Briefly describe the vascular tissue system.
- (b) Write a short note on stele.
- (c) Describe the anomalous secondary growth in dicot stem.

3 Answer the following : **2×7=14**

- (a) Explain syncarpous type of floral development.
- (b) Briefly describe the effects of temperature on plants.

OR

3 Answer the following: **2×7=14**

- (a) Write a short note on development of flowers with inferior ovaries.
- (b) Briefly describe the origin of stem.

- 4 Answer the following : **2×7=14**
- (a) Describe the process of megasporogenesis.
 - (b) What is endosperm ? Describe in brief major type of endosperm.
- 5 Write short notes on any two of the following : **2×7=14**
- (a) Adventive embryony
 - (b) Male gametophyte
 - (c) Polyembryony
 - (d) Experimental embryology.
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