



**HDU-BOT313**

Seat No. \_\_\_\_\_

**M. Sc. (Sem. III) (CBCS) Examination**

**November / December – 2017**

**BOT-313 : Botany**

***(Plant Anatomy, Morphogenesis & Embryology)***

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

[Total Marks : 70

**1** Answer any seven questions from the followings : **2×7**

- (a) What is anomalous growth?
- (b) What is thermoperiodism ?
- (c) What is chemical vernalization?
- (d) What is photothermal induction?
- (e) What is apomixes?
- (f) What is the role of embryology in taxonomy?
- (g) What is microsporogenesis?
- (h) What is the role of suspensor?
- (i) What is tapetum cells? Explain its role.
- (j) What is proembryo?

**2** Answer any two from the followings : **2×7**

- (a) What is phloem? Explain its elements in detail.
- (b) What are secretory tissues? Explain its types in detail.
- (c) Explain epidermal tissue system in detail.

**3** Explain the followings : **2×7**

- (a) Write a short note on Apocarpous type of floral development.
- (b) Write a short note on Syncarpous type of floral development.

**OR**

**3** Explain the followings : **2×7**

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

- 4 Answer on the followings : 2×7
- (a) Endosperm development in dicot
  - (b) Types of embryo sac
- 5 Write short notes on any two from the followings : 2×7
- (a) Adventive
  - (b) Polyembryony
  - (c) Types of the ovule
  - (d) Double fertilization.
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