

AS-1396

## B.Sc. Part—I (Semester—II) Examination

## APICULTURE

## (Bee Botany, Pollination and Mellitto Palynology)

Time : Three Hours]

[Maximum Marks : 80

- N.B. :—** (1) Question No. 1 is compulsory and carries 8 marks.  
 (2) Question Nos. 2 to 7 carry equal marks.  
 (3) Draw well labelled diagrams wherever necessary.

1. (a) Fill in the blanks :

- (i) The pollination by insects is known as \_\_\_\_\_ pollination.  $\frac{1}{2}$   
 (ii) The plant kingdom is divided into two groups \_\_\_\_\_ and phanerogams.  $\frac{1}{2}$   
 (iii) Pollen grains transfer from anther to \_\_\_\_\_ of a flower is known as pollination.  $\frac{1}{2}$   
 (iv) Bees collect \_\_\_\_\_ and \_\_\_\_\_ from flower.  $\frac{1}{2}$

(b) Choose correct alternatives :

- (v) \_\_\_\_\_ is one of the applied branches of Palynology.  
 (a) Histology (b) Morphology  
 (c) Mellittopalynology  $\frac{1}{2}$
- (vi) Syeonus is the \_\_\_\_\_ type of fruit.  
 (a) Simple (b) Aggregate  
 (c) Composite  $\frac{1}{2}$
- (vii) A \_\_\_\_\_ is horticultural crop.  
 (a) Nerium (b) Tulsi  
 (c) Orange  $\frac{1}{2}$
- (viii) The gap between two flowering periods is known as \_\_\_\_\_.  
 (a) Flowering season (b) Flowering gap  
 (c) Flowering sequence  $\frac{1}{2}$

- (c) Answer in **one** sentence :
- (ix) What is nectar ? 1
  - (x) Define annuals. 1
  - (xi) Any two bee plants. 1
  - (xii) Define pollen basket. 1
2. Explain the following :
- (a) Cross pollination 4
  - (b) Types of fruits 4
  - (c) Methods of identification of flowering plants. 4
- OR**
- (d) Outline of plant kingdom 4
  - (e) Morphology of nectar glands 4
  - (f) Fertilization in flowering plants. 4
3. Describe the agricultural bee flora of the local area. 12
- OR**
- Give illustrated account of the roadside bee plants with reference to the tree flora. 12
4. Give brief account of any six important perennial bee plants of India 12
- OR**
- Explain the specific method of preparation of floral calendar. Add a note on advantages of bee flora calendar. 12
5. Describe the following :
- (a) Types of pollen 4
  - (b) Advantages of cross pollination 4
  - (c) Pollen bag on hind leg (only diagram). 4
- OR**
- (d) Types of pollination 4
  - (e) Shapes of pollen grains 4
  - (f) Methods of preparation of pollen slide. 4

6. Explain the following :
- (a) Role of pollinating agents 4
  - (b) Method of self pollination in bee plants 4
  - (c) Advantages of cross pollination. 4

**OR**

- (d) Objectives of bee pollination 4
  - (e) Effect of topographical factors on cross pollination 4
  - (f) Disadvantages of self pollination. 4
7. Describe the following :
- (a) Objectives of migration of bee colonies 4
  - (b) Farmer bee keeper relationship 4
  - (c) Preventive measures for the insecticidal effects on honey bees. 4

**OR**

- (d) Advantages of honey bee colony migration 4
- (e) Chemical composition of honey 4
- (f) Effects of insecticides on honey bees. 4

