



Time : Three Hours]

[Maximum Marks : 80

Note :— (1) All questions are compulsory.

(2) Question Nos. 2 to 7 carry equal marks.

1. (A) Fill in the blanks :—

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|--|---|
| (a) Bee plant yields _____ and _____ for bees. | ½ |
| (b) Study of Pollen grains is called _____. | ½ |
| (c) Entomophily is pollination by _____. | ½ |
| (d) Honey bee carries pollen grains in _____. | ½ |

(B) Choose correct option :—

- | | |
|--|---------------|
| (e) In pollination pollen grains transfer from stamens to _____. | ½ |
| (i) ovary | (ii) anther |
| (iii) stigma | (iv) stipul |
| (f) Anemophily is a pollination by — | ½ |
| (i) wind | (ii) insect |
| (iii) bats | (iv) water |
| (g) The horticultural crops is _____. | ½ |
| (i) orange | (ii) tulsi |
| (iii) neem | (iv) nerium |
| (h) Conversion of nectar to honey by bees is called : | ½ |
| (i) regurgitation | (ii) foraging |
| (iii) swarming | (iv) derth |

(C) Answer in **ONE** sentence each :—

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|-------------------------------|---|
| (i) Define cross pollination. | 1 |
| (j) What is autogamy ? | 1 |
| (k) What is palynology ? | 1 |
| (l) Define bee plant. | 1 |

- | | |
|--|---|
| 2. (a) Give the classification of bee plants with suitable examples. | 4 |
| (b) Explain process of fertilization in flowering plants. | 4 |
| (c) Explain secretion of nectar. | 4 |

OR

- | | |
|--|---|
| (d) Explain male and female parts of flower. | 4 |
| (e) Give composition of nectar. | 4 |
| (f) Explain development of fruit. | 4 |

**OR**

Discuss wild and horticultural bee plants with their flowering plants. 12

4. (g) Explain floral gap. 4
(h) Explain concept of floral sequence and its advantages. 4
(i) Describe floral calendar, give its advantages. 4

OR

- (j) How honey becomes toxic? 4
(k) Explain major bee crops in India with their flowering period and region. 4
(l) Describe season of major honey flow in India. 4
5. (m) Draw a diagram of pollen bag on hind leg. 4
(n) Explain honey bees are more efficient for pollination. 4
(o) Explain method for preparation of pollen slide. 4

OR

- (p) Explain types of pollen. 4
(q) Describe the method to identify floral source. 4
(r) Give characteristics of pollen grains. 4
6. Discuss pollination with their types and its advantages and disadvantages. 12

OR

Discuss various pollinating agents. 12

7. (s) Explain the concept of migratory bee keeping. 4
(t) Describe measures to protect bees from insecticide spraying. 4
(u) Explain the concept of service for pollination through beekeeping. 4

OR

- (v) Explain how bees convert nectar to honey. 4
(w) Explain advantages of honey bees to farmer and bee keeper. 4
(x) Explain advantages of migration of bee colonies. 4