

Roll No. ....

Total Pages : 3

**CMDQ/M-24**

**5633**

## **BIOLOGY OF REPRODUCTION AND ANATOMY**

Paper–BOT–402

Time Allowed : 3 Hours]

[Maximum Marks : 80

**Note** : Attempt **five** questions in all, selecting **one** question from each Unit. Question No. **1** is compulsory. All questions carry equal marks.

### **Compulsory Question**

1. Define/Explain the following : 8×2=16

- |                            |                    |
|----------------------------|--------------------|
| (a) Obturator.             | (b) Polyembryony.  |
| (c) Campylotropous ovule.  | (d) Epistase.      |
| (e) Dichogamy.             | (f) Endothelium.   |
| (g) Crassinucellate ovule. | (h) Ubisch bodies. |

### **UNIT-I**

2. With the help of labeled diagrams describe the structure of a typical bithecous anther. Explain the function of different layers of anther wall. 16

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**P. T. O.**

3. Write concise notes on any **two** of the following :

- (a) Development of Male gamete in angiosperms.
- (b) Factors affecting Pollen germination and Pollen tube growth
- (c) Importance of Palynology. 2×8=16

### **UNIT-II**

4. What is Monosporic type of Embryo sac development? Describe Polygonum type of Embryo sac development in detail. 16

5. Write concise notes on any **two** of the following :

- (a) Ultrastructure and function of Synergid.
- (b) Pollination mechanisms favouring Cross pollination.
- (c) Haustorial behaviour of Embryo sac. 2×8=16

### **UNIT-III**

6. Define the Self incompatibility. Discuss its types, and methods to overcome Self incompatibility. 16

7. What are Embryoids ? Describe the technique of Raising embryoids from anthers and their applications. 16

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**2**

#### UNIT-IV

8. Explain the role of Anatomical features in solving taxonomic problems. Support your answer with suitable examples. 16

9. Write short account of any **two** of the following :

(a) Secondary growth in Dracaena.

(b) Intraxylary phloem and Interxylary phloem.

(c) Abnormal behaviour of Normal cambium.

2×8=16