

B.Sc. (CBCS Pattern) Semester-III  
**012A - Botany Paper-I : Reproductive Biology of Angiosperms,  
Plant Growth and Development**

P. Pages : 2

Time : Three Hours



**GUG/W/24/11598**

Max. Marks : 50

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**1.** Write on-

- |  |   |
|--|---|
| a) What is Pollination? Describe the contrivances for cross pollination. | 5 |
| b) Describe the types of Embryo sac.                                     | 5 |

**OR**

Write short note on-

- |  |    |
|--|----|
| c) Female gametophyte (polygonum type) | 2½ |
| d) T.S. of anther (Diagram only)       | 2½ |
| e) Types of ovules                     | 2½ |
| f) Structure of pollen grain.          | 2½ |

**2.** Write on-

- |   |   |
|---|---|
| a) Describe the development of Dicot Embryo (Onagrad type)      | 5 |
| b) Explain the process of Double fertilization & Triple fusion. | 5 |

**OR**

Write short note on-

- |                                    |    |
|------------------------------------|----|
| c) Types of Embryo.                | 2½ |
| d) Suspended animation.            | 2½ |
| e) Methods to break seed dormancy. | 2½ |
| f) Seed dispersal strategies.      | 2½ |

3. Write on-
- a) What are plant growth regulators? Write the role of Auxin. 5
  - b) Describe Tropic movement in plants. 5

**OR**

Write short notes on-

- c) Nastic movements. 2½
- d) Phases of Growth. 2½
- e) Physiological Role of Cytokinin. 2½
- f) Gibberellin. 2½

4. Write on-
- a) What is photoperiodism? Describe short day plants and long day plant in detail. 5
  - b) Explain Phytochrome in detail. 5

**OR**

Write short note on-

- c) Concept of florigen. 2½
- d) Abscission. 2½
- e) Vernalization. 2½
- f) Biological clock. 2½

5. Write on the following in 2 to 3 lines **any ten** (diagrams are not necessary). 10
- |                        |                       |
|------------------------|-----------------------|
| a) Sporopollenin       | b) Synergids          |
| c) Cleistogamy         | d) Porogamy           |
| e) Secondary dormancy  | f) Zoochory           |
| g) Log phase of growth | h) Ethylene           |
| i) IAA                 | j) Day neutral Plants |
| k) Senescence          | l) Abscission layer   |

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