



**RAK-003-001406**

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

**B. Sc. (Sem. IV) (CBCS) Examination**

**March / April – 2019**

**Botany : B - 401**

*(Applied Botany)*

**Faculty Code : 003**

**Subject Code : 001406**

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

[Total Marks : 70

- Instructions :** (1) This question paper contains three questions. All questions are compulsory.  
(2) Write answers of all the questions in main answer sheet.  
(3) Draw neat and labelled diagram wherever necessary.  
(4) Figures to the right indicate full marks for the questions.

- 1** Answer the following objective type questions : **20**
- (1) Biologist celebrate 5<sup>th</sup> June as \_\_\_\_\_.
  - (2) The size of silt particle is \_\_\_\_\_.
  - (3) Water pollution by \_\_\_\_\_ caused minamata disease.
  - (4) The nutrient rich horizon of soil is \_\_\_\_\_.
  - (5) Plants having similar genotypes produced by plants breeding are called \_\_\_\_\_.
  - (6) The term antibiotic was coined by\_\_\_\_\_.
  - (7) The loss of genes from a gene pool is called \_\_\_\_\_.
  - (8) Write the size of typical herbarium sheet.
  - (9) Define : Lenticels.
  - (10) Double fertilization was discovered by:
  - (11) Leaf abscission is caused by:
  - (12) Plants possess \_\_\_\_\_ hairs, which are capable of injecting substance into animals that cause irritation.

- (13) Who discover gibbrellin ?
- (14) Give the full name of PEP.
- (15) Minerals absorbed by root move to leaf through ?
- (16) Loading of phloem means \_\_\_\_\_.
- (17) CMS means \_\_\_\_\_.
- (18) ICAR means \_\_\_\_\_.
- (19) Define mass selection.
- (20) \_\_\_\_\_ grafting is used to 'bridge' a diseased or damaged area of a plant.

- 2** (a) Answer in brief : (any **three**) **6**
- (1) What are three main functions of cytokinin ?
  - (2) Define the term "Polyploidy".
  - (3) Write note on : Nectary gland.
  - (4) Write briefly on the following : Cork.
  - (5) Define micronutrients and macronutrients.
  - (6) Give one difference between molecular pharming and molecular farming.
- (b) Answer in detail : (any **three**) **9**
- (1) How the male gametes formed ?
  - (2) Action mechanism of ethylene.
  - (3) Explain the processes of leaf abscission.
  - (4) How CO<sub>2</sub> is fixed during C<sub>4</sub> cycle ?
  - (5) Write a note : Reasons for grafting.
  - (6) Future of green revolution.
- (c) Write notes on : (any **two**) **10**
- (1) Explain the processes of double fertilization in angiosperms.
  - (2) Describe the theory of transport of organic substance.
  - (3) Describe vegetative propagation.
  - (4) What is periderm ? Describe the method of its formation and its uses.
  - (5) Discuss photosynthesis in C<sub>3</sub> plants.

- 3** (a) Answer in brief : (any **three**) **6**
- (1) Explain Biomagnifications and Eutrophication.
  - (2) What is the purpose of anther culture ?
  - (3) Write short note on : Transgenic plants.
  - (4) Differentiate mor and mull humus.
  - (5) Define digestive glands.
  - (6) Describe soil profile.
- (b) Answer in detail : (any **three**) **9**
- (1) Explain how botanist works in the area of plant breeding.
  - (2) State the source of water pollution.
  - (3) Write on types of water erosion.
  - (4) What is global warming ? Write its effect on ecosystem.
  - (5) Explain in brief about components of soil.
  - (6) What is horticulture ? Explain the division of horticulture.
- (c) Write notes on : (any **two**) **10**
- (1) What is remote sensing ? Write major application of remote sensing for the management of ecosystem.
  - (2) Explain twenty first century plant breeding.
  - (3) Describe different methods of soil conservation.
  - (4) Describe the various methods of plant tissue culture.
  - (5) What do you understand from the word floriculture ? What are the economic flowers grown in South India ?
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