

QTK

2009  
BOTANY - I (Optional)

100141

Standard : Degree

Total Marks : 200

Nature : Conventional

Duration : 3 Hours

Note :

- (i) Answers must be written in *English* only.
- (ii) Question No. 1 is *Compulsory*. Of the remaining questions, attempt *any four* selecting one question from *each* section.
- (iii) Figures to the *RIGHT* indicate marks of the respective question.
- (iv) Number of optional questions upto the prescribed number in the order in which they have been solved will only be assessed. Excess answers will not be assessed.
- (v) Credit will be given for orderly, concise and effective writing.
- (vi) Draw neat and clear diagrams wherever necessary.
- (vii) Candidate should not write roll number, any name (including their own), signature, address or any indication of their identity anywhere inside the answer book otherwise he/she will be penalised.

Marks

1. Answer **any four** of the following questions :

- (a) Write a detailed account of evolution of sex organs in algae. 10
- (b) "Alternation of generation is an important pattern in the life cycle of organism in Bryophyta". Explain. 10
- (c) Describe the natural system of classification giving its merits and demerits. 10
- (d) What is carbon dating ? Write a note on its importance in palaeobotany with reference to oil and coal exploration. 10
- (e) With the help of suitable diagrams explain different types met within the development of dicot embryo. 10

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## SECTION - A

2. Answer the following sub-questions :
- (a) With the help of suitable diagrams describe the life cycle of *Batrachospermum*. Write a note on the food value of members of Rhodophyceae. 20
- (b) Give a general account of different systems of classification of fungi studied by you. Write a note on important features of Deuteromycotina. 20
3. Answer the following sub-questions :
- (a) Give an account of distinguishing features of chlorophyceae with reference to thallus structure and reproduction. 20
- (b) Write an essay on Mushroom cultivation. 20

## SECTION - B

4. Answer the following sub-questions :
- (a) Give a general account of Anthocerotopsida. 10
- (b) Discuss the different sori structures observed in Pteropsida. 10
- (c) With reference medical microbiology describe *any two* applications. 10
- (d) Describe various types of plant diseases caused by bacteria. What are their methods of control measures ? 10
5. Answer the following sub-questions :
- (a) With the help of diagrams describe the internal and external structure of thallus of *Marchantia*. 10
- (b) Describe the alternation of generation in *any one* plant of Lycopsidea. 10
- (c) Discuss the role of microbes in control of water pollution. 10
- (d) Define phytoimmunology. Explain salient features of science of phytoimmunology. 10

## SECTION - C

6. Answer the following sub-questions :
- (a) Give a brief account of diversity observed in various groups of Gymnosperms. 10
- (b) Give systematic positions and diagnostic characters of family Asclepiadaceae and Orchidaceae. 15
- (c) What is polyembryony ? How does it differ from apomixis ? 15
7. Answer the following sub-questions :
- (a) Describe the structure of male and female cone of *Gnetum*. Write a note on its female gametophyte. 10
- (b) Discuss the contribution of cytology and phytochemistry to taxonomy. 15
- (c) What is anomalous secondary growth ? Describe adaptive growth in *any two* woody climbers studied by you. 15

**SECTION - D**

8. Answer the following sub-questions :
- (a) Write a brief description of class cordaitales. 10
  - (b) Give a detailed account of origin of cultivated plants. Write a note on Vavilov's centres of origin. 15
  - (c) Give an ethnobotanical approach in conservation of medicinal plants in India. 15
9. Answer the following sub-questions :
- (a) Give a brief account of class Bennettitales. 10
  - (b) Write a detailed account of fibre and gums yielding plants. 15
  - (c) Describe the various techniques and add a special note on significance of Herbaria. 15

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