

AKU

2007
BOTANY - I (Optional)

100098

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.

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

Marks

- | | |
|---|----|
| (a) Give an account of diagnostic characters of Kingdom Fungi. | 10 |
| (b) Distinguish between gametophytes of Bryophytes and those of Pteridiophytes. | 10 |
| (c) Give an account of microsporophyll in coniferales with suitable examples. | 10 |
| (d) Give an account of fossil members of Ferns in exploration of coal. | 10 |
| (e) Describe anomalous secondary growth in woody monocot. | 10 |

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SECTION - A

2. Answer the following sub-questions :
- (a) Give an account of occurrence of brown algae along the west coast of Maharashtra. 20
 - (b) Describe asexual reproduction structure in Deuteromycotina. 20
3. Answer the following sub-questions :
- (a) Trace the evolution of thallus organization in Chlorophyceae. 20
 - (b) Give account of importance of Spawn in mushroom cultivation. Add a note on master culture. 20

SECTION - B

4. Answer the following sub-questions :
Draw a neat labelled diagram of
- (a) Sporophyte of *Funaria*. 10
 - (b) Sporangia of Pteropsida. 10
 - (c) Tobacco Mosaic virus. 10
 - (d) Life cycle of *Puccinia graminis tritici*. 10
5. Answer the following sub-questions :
- (a) Characters used in classification of Bryophytes and Pteridophytes. 10
 - (b) Diagnostic Characters of Psilopsida. 10
 - (c) Human pathogenic bacteria and note on gram staining. 10
 - (d) Disease cycle of any one leaf pathogenic fungi. 10

SECTION - C

6. Answer the following sub-questions :
- (a) Describe internal structure of Wood from any one member of conifer. 10
 - (b) Give an account of Origin of Angiosperms. 15
 - (c) Compare diagnostic characters of Verbenaceae with that of solanaceae citing suitable example. 15

7. Answer the following sub-questions :
- (a) Describe reproductive structure in cycadales. 10
 - (b) Give principle and outline of system of classification proposed by Bentham and Hooker. 15
 - (c) Give an account of heart shape embryo development in Angiosperms. 15

SECTION - D

8. Answer the following sub-questions :
- (a) Describe reproductive structure in Bennettitales. 10
 - (b) Explain Vavilov's theory of origin of cultivated plants. 15
 - (c) Give an account of importance of Botanical garden and herbaries in studies of plant sciences. 15
9. Answer the following sub-questions :
- (a) Describe reproductive structures in Cycadofilicales. 10
 - (b) Give botanical (latin) names of any five botanical sources of food, fiber, beverages and timber. 15
 - (c) Give an account of present scenario of medicinal plant based industries in Maharashtra. 15

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