

MFS

2007

BOTANY (Optional)

वनस्पतीशास्त्र (वैकल्पिक)

002369

Time : 3 hours

Maximum Marks : 200

- Note :
- In all attempt five questions.
 - Question No. 1 is compulsory.
 - Of the remaining Questions, Attempt any four by selecting one question from each section.
 - Numbers of optional questions upto the prescribed number in the order in which questions have been solved, will only be assessed and excess answers of the question/s will not be assessed.
 - Candidate should not write roll number, any names (including their own), signature, address or any indication of their identity anywhere inside the answer book otherwise he will be penalised.

1. Answer any four of the following questions : 40
- What is complex tissue ? Describe its structure and functions.
 - Write an essay on the economic importance of Lichens.
 - Give an account of Ultrastructure of Bacterial Cell.
 - What are hydrophytes ? Describe hydrophytic adaptations.
 - What is secondary growth ? How it takes place in dicotyledonous stem.

SECTION - A

2. Answer the following questions :
- Describe the ultrastructure and functions of Nucleus. 20
 - What is crossing over ? Describe the mechanism and theories of crossing over. 20
3. Answer the following questions :
- Define reductional division. Explain Meiosis I in detail. 20
 - What is Linkage ? Describe the coupling and repulsion mechanism. 20

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SECTION - B

4. Answer the following questions :
- (a) What is alternation of generations ? Describe it with the help of Life Cycle of Pinus. 20
 - (b) Describe in detail the development of endosperm and its types. 20
5. Answer the following questions :
- (a) Give comparative account of systems of classifications of Bentham and Hooker and Engler and Prantle. 20
 - (b) Describe double fertilization and triple fusion in Angiosperms. 20

SECTION - C

6. Answer the following questions :
- (a) Describe the mechanism of enzyme action and properties of enzymes. 20
 - (b) Differentiate between photosynthesis and respiration. 20
7. Answer the following questions :
- (a) Describe in detail the mechanism of protein synthesis. 20
 - (b) What are Phytohormones ? Describe physiological effects of Auxins and Gibberellins. 20

SECTION - D

8. Answer the following questions :
- (a) Define biotechnology. Explain its role in Agriculture and Industry. 20
 - (b) Define Pollution. Give an account of water pollutants, its effects and methods of control. 20
9. Answer the following questions :
- (a) Describe the origin, morphology, method of extraction of coconut fibres and their economic importance. 20
 - (b) What is ecosystem ? Describe the components of ecosystem. 20

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