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BOT-552

Medicinal Plants and Embryology of Angiosperms

M.Sc. BOTANY (MSCBOT-12/13/16/17)

Second Year, Examination 2021 (Winter)

Time: 2 Hours

Max. Marks: 80

Note : This paper is of Eighty (80) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

Section – A

(Long Answer – type questions)

Note: Section 'A' contains Five (05) long-answer-type questions of Twenty (20) marks each. Learners are required to answer any two (02) questions only.

[2 x 20 = 40]

Q.1. Define the term ethanobotany. Give a detail account of concept, scope and importance of ethanobotany.

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- Q.2. Give a detailed account of microsporogenesis and development of male gametophyte.
- Q.3. Describe morphology, Phytochemical constituents and medicinal uses of Rauvolfia serpentina and Phyllanthus emblica.
- Q.4. What are the objectives of experimental embryology ? Describe the process of anther culture and its applications.
- Q.5. Give a detail account of apomixis.

Section – B

(Short-answer-type questions)

Note: Section 'B' contains Eight (08) short-answer-type questions of Ten (10) marks each. Learners are required to answer any Four (04) questions only.

[4 x 10 = 40]

- Q.1. Describe tetrasporic embryosac with labelled diagram.
- Q.2. What is endosperm ? Describe the endosperm haustoria and its functions.

- Q.3. With the help of suitable diagram, describe the structure of mature ovule.
- Q.4. Write short note on cleavage and nucellar polyembryony.
- Q.5. Give a concise account on self incompatibility.
- Q.6. Discuss briefly about induced Parthenocarpy.
- Q.7. Explain briefly about the cultivation of any two medicinal plants studied by you.
- Q.8. Describe briefly any two of the following :
1. Ex-situ conservation of medicinal plants.
 2. Structure of dicotyledonous embryo.
 3. Aeropalynology
 4. Structure and function of tapetum.
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