M.Sc-II Botany Semester-IV,
Paper-I, 07/06/2023

Time: 2.1/2-hour **Max. Marks: 60 Marks**

N.B.: 1. all questions are compulsory.
2. Draw neat and labeled diagram wherever necessary.
3. Figures to the right indicate full marks.

Q.1). Citing suitable examples, describe the difference between preparative and analytical centrifugation. (12 M)

OR

Q.1). Explain differential centrifugation? Add a note on its application. (12 M)

Q.2). Explain the technique and applications of HPLC. (12 M)

OR

Q.2). What are the applications of HPTLC for validation of herbal drugs? (12 M)

Q.3). Briefly explain the effect of different types of radiations. (12 M)

OR

Q.3). Describe Inverse PCR with diagram. (12 M)

Q.4). Define IPR. Explain the process of IPR patent filing. Add a note on the scope of IPR. (12 M)

OR

Q.4). How do you characterize nano particles using suitable analytical techniques? (12 M)

Q.5). Write short note on any four of the following: (3 Marks each) (12 M)

a) Svedberg coefficient
b) Applications of ion exchange chromatography
c) Phases of chromatography
d) TRIPS
e) Scanning Electron Microscopy in nano technology
f) Forgery and counterfeiting

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