

Parvatibai Chowgule College of Arts and Science

Autonomous

B.Sc. Semester End Examination, January and 2022.

Semester: I

Duration: 2 Hours

Subject: Botany

Max. Marks: 45

Title: Plant Diversity

Instructions: 1. All question are compulsory, however internal choice is available

2. Briefly answer sub question of Q.4

3. Figures to the right indicate maximum marks to each question/ sub question

Q. 1. Answer **ANY THREE** of the following: (09)

- Write a brief note on chloroplast in algae.
- Highlight Indian contribution in fossil study.
- Describe briefly morphological nature of *Marsilea* sporocarp and venation and vernation in its leaf.
- Describe *Pinus* seed.

Q. 2. Answer **ANY TWO** of the following: (12)

- Describe the structure and reproduction of *Chara* and discuss its position in algae.
- Give an account of stelar structure and primitive characters of *Psilotum*.
- Discuss types of fossils based on fossilization.

Q. 3. Answer **ANY TWO** of the following: (12)

- Give a comparative account of structure of sporophytes of *Marchantia* and *Anthoceros* with the help of diagrams.
- Give an account of the structure of mycelium and sexual reproduction in *Penicillium* with the help of diagrams.
- Describe gonidial layer. Discuss the types of vegetative reproduction in lichens.

Q. 4. Answer ANY ONE of the following:

(12)

- a) Differentiate bryophytes, pteridophytes and gymnosperms from each other.
- b) Give an illustrated account of homosporous and heterosporous life cycle in pteridophytes.

OR

- a) *Gnetum* remains a phylogenetic puzzle. Discuss.
- b) 'There is gradual elimination of female sex organ archegonium in gymnosperms'. Discuss the statement.
