



PUNJAB PUBLIC SERVICE COMMISSION
COMBINED COMPETITIVE EXAMINATION
FOR RECRUITMENT TO THE POSTS OF
PROVINCIAL MANAGEMENT SERVICE, ETC -2023
CASE NO. 1C2024

SUBJECT: BOTANY (PAPER-I)

TIME ALLOWED: THREE HOURS

MAXIMUM MARKS: 100

NOTE:

- i. All the parts (if any) of each Question must be attempted at one place instead of at different places.
- ii. Write Q. No. in the Answer Book in accordance with Q. No. in the Q. Paper.
- iii. No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
- iv. Extra attempt of any question or any part of the question will not be considered.

NOTE: Attempt FIVE Questions in All. Attempt in Urdu or English.

- Q. No.1** ✓ (a) Mention general characteristics and economic importance of Bacillariophyta.
(b) Give outline of life cycle of a typical Diatom. **(10+10=20 Marks)**
- Q. No.2** (a) Describe various modes of reproduction in *Pythium*.
(b) Write note on early blight of potato disease. **(10+10=20 Marks)**
- Q. No.3** ✓ (a) Explain gametophyte structure of *Funaria*.
(b) How sporophyte of *Anthoceros* is considered advanced? Give point wise detail. **(10+10=20 Marks)**
- Q. No.4** ✓ What are fossils? How fossils are formed? Discuss various modes of preservation with respect to organic origin? **(20 Marks)**
- Q. No.5** ✓ Describe the salient features of gymnosperms. Explain in detail how gymnosperms are beneficial for mankind? **(20 Marks)**
- Q. No.6** Describe in detail the stomata with respect to their origin, structure types and functions? **(20 Marks)**
- Q. No.7** (a) What is biosystematics? How Operational Taxonomic Units (OTUs) are significant for arranging the plants into groups?
(b) What is sporogenesis? Discuss the various ways of micro- and megasporogenesis in plants? **(10+10=20 Marks)**
- Q. No.8** Explain structure and morphological nature of sporocarp of *Marsilia*. **(20 Marks)**