



**PUNJAB PUBLIC SERVICE COMMISSION**  
**COMBINED COMPETITIVE EXAMINATION**  
**FOR RECRUITMENT TO THE POSTS OF**  
**PROVINCIAL MANAGEMENT SERVICE -2020**

**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.

**Attempt FIVE Questions in All. Attempt in Urdu or English.**

- Q. No. 1:** a) Discuss the economic importance of Cyanophyta  
b) Write a note on distribution and general characteristics of Phaeophytes  
(10+10=20 Marks)
- Q. No. 2:** a) Describe the structure of a fungus. How a fungal body is different from a plant  
b) Describe the importance of fungi for mankind  
(10+10=20 Marks)
- Q. No. 3:** a) Write a note on the evolution of sporophyte in Bryophytes  
b) Describe the differences between liverworts and mosses  
(10+10=20 Marks)
- Q. No. 4:** a) Discuss the characteristic features of Pteridophytes  
b) Write a note on evolution of seed  
(10+10=20 Marks)
- Q. No. 5:** a) Describe the evolutionary tendencies of Cycadophytes  
b) Write a note on life history of conifers  
(10+10=20 Marks)
- Q. No. 6:** a) Describe the rules of Plant Nomenclature  
b) Write a note on importance of Botanic Gardens  
(10+10=20 Marks)
- Q. No. 7:** a) Give the structure and function of epidermal hairs and bulliform cells  
b) Write a note on abnormal secondary growth in dicots  
(10+10=20 Marks)
- Q. No. 8:** a) What is polyembryony? Give its types and practical significance in plants  
b) Explain the development of micro gametophyte and male gametes in angiosperms  
(10+10=20 Marks)