



UNIVERSITY OF THE PUNJAB

First Semester – 2019

Examination: B.S. 4 Years Program

Roll No. in Fig.

Roll No. in Words.

PAPER: Botany-I (Plant Diversity)

MAX. TIME: 15 Min.

Course Code: BOT-101 Part – I (Compulsory)

MAX. MARKS: 10

Signature of Supdt.:

Attempt this Paper on this Question Sheet only.

Please encircle the correct option. Division of marks is given in front of each question.

This Paper will be collected back after expiry of time limit mentioned above.

Q.1. Encircle the right answer, cutting and overwriting is not allowed. (1x10=10)

- The *Ectocarpus* species are golden brown in color due to presence of dominant -----
(a). fucoerythrin (b). fucoxanthin
(c). beta-carotene (d). both b & c
- is hemiendophytic in nature.
(a). *Penicillium* (b). *Phyllactinia*
(c). *Mucor* (d). Both a & b
- In -----, the life cycle is triphasic.
(a). *Ectocarpus* (b). *Polysiphonia*
(c). *Chara* (d). none of these
- In a heteroecious and macrocyclic rust fungus, spore stages ----- are produced on primary or principal host.
(a). II, III (b). 0, I
(c). I, II (d). none of these
- In lichen thallus, ----- is the central core, consisting of loosely interwoven hyphae.
(a). Cortex (b). Medulla
(c). Algal zone (d). none of these
- Synangium is the characteristic feature of -----
(a). *Selaginella* (b). *Psilotum*
(c). *Equisetum* (d). *Marsilea*
- In *Oscillatoria* species, the reproduction is mostly vegetative by the formation of -----
(a). heterocysts (b). hormogonia
(c). akinetes (d). both a & b
- In ----- type of bacteria, flagella protrude from all portions of the bacterial surface.
(a). amphitrichous (b). peritrichous
(c). lophotrichous (d). none of these
- are the spore bearing vascular plants.
(a). Bryophytes (b). Pteridophytes
(c). Gymnosperms (d). none of these
- is the largest group of gymnosperms.
(a). conifers (b). cycads
(c). Gnetales (d). none of these



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First Semester – 2019

Examination: B.S. 4 Years Program

Roll No.

PAPER: Botany-I (Plant Diversity)

Course Code: BOT-101 Part – II

MAX. TIME: 2 Hrs. 45 Min.

MAX. MARKS: 50

ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Q. No. 2: Answers the following questions briefly. (20 MARKS)

1. What are different types of bacteria on the basis of flagellation?
2. What are lichens? What are their different types on the basis of thalli?
3. Describe Auxospore formation in *Pinnularia*.
4. What is Protostele? What are its different types?
5. What are Pili? What is their key role in Bacteria?
6. What are angiospermic features of *Ephedra* plant?
7. How will you differentiate heteroecious and autoecious Rust fungi?
8. What is evolutionary significance of sporophyte of *Anthoceros*?
9. What is meant by scalariform conjugation in *Spirogyra*?
10. What is meant by Clump formation in *Ectocarpus*?

Q. No. 3: Give comprehensive answers of the following questions. (30 MARKS)

- I. a). What is Heterospory? Describe heterospory in *Selaginella*. (05)
b). *Cycas* is a living fossil. Discuss. (05)
- II. a). Draw and describe life cycle of Rust fungi. (05)
b). Explain Reproduction in *Chara* with the help of labeled diagrams. (05)
- III. a). Describe canal system in *Equisetum* stem. (05)
b). Write a note on economic importance of Cyanobacteria. (05)