

B.Sc. Semester - 3 (CBCS) Examination
Oct/Nov. -2019 (Old Course)
BOTANY (CORE)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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Q-1 Answer the following questions as per instruction.**(A) Answer in very short (any three) :****03**

1. State role of Stigma in algal cell?
2. What is the shape of colony of *Pediastrum*?
3. Why Nostoc is known as fallen stars?
4. Why Cyanophages are introduced into water?
5. Each monospore of *Batrachospermum* again germinate into a heterotrichous, protonema called?

(B) Answer in brief (any one):**04**

1. Write ultra-cell structure of fallen stars with diagram.
2. Describe Flagella of algal cell

(C) Answer in detail (any one):**07**

1. Explain with diagram sex organs and fertilization in frog spawn algae.
2. Describe filamentous forms of thallus structure in algae.

Q-2 Answer the following questions as per instruction.**(A) Answer in very short (any three):****03**

1. Name the septum in which septal pore is surrounded by parenthosome.
2. Who first of all studied the ultrastructure of yeast cell?
3. **Fill in the blanks:** Antheridium is completely absent in *Aspergillus*.....
4. **True or False?** Mycelium of *Aspergillus* produces haustoria.
5. Which species of *Aspergillus* is rich source of riboflavin?

(B) Answer in brief (any one):**04**

1. Explain: Industrial application of yeast in Brewing industries.
2. Describe haplontic life cycle in yeast

(C) Answer in detail (any one):**07**

1. Describe asexual reproduction in *Eurotium*.
2. Discuss vegetative structure of yeast cell.

Q-3 Answer the following questions as per instruction.**(A) Answer in very short (any three):****03**

1. What is cladia in bryophytes?
2. Name the pigment present in amphigastria of *Marchantia*?
3. **True or False?** *Marchantia* is a dioecious plant.
4. Name two growth stages of *Funaria* life cycle.
5. Which cell closed the tip of the neck of archegonia in *Funaria*?

(B) Answer in brief (any one):**04**

1. Give difference between: capsule of *Marchantia* and capsule of *Funaria*
2. Discuss Industrial uses of Bryophytes.

- (C)Answer in detail (any one):** **07**
1. Describe antheridial branch of *Funaria* with diagram.
 2. Describe with diagram: Archegoniophore in *Marchantia*
- Q-4. Answer the following questions as per instruction.**
- (A)Answer in very short (any three):** **03**
1. Give one word: The basal hemispherical portion of ligule.
 2. Name epiphytic species of Spike moss plant?
 3. State the type of sorus in *Adiantum*.
 4. Which stage is considered an advance stage of heterospory?
 5. What is Eustele?
- (B)Answer in brief (any one):** **04**
1. Explain the importance of heterospory.
 2. Explain mature prothallus of *Adiantum*.
- (C)Answer in detail (any one):** **07**
1. Discuss spore producing organs of *Selaginella*
 2. Describe in detail the basic features of telome theory.
- Q-5. Answer the following questions as per instruction.**
- (A)Answer in very short (any three):** **03**
1. Which plant group is known as Phanerogames without ovary?
 2. True or False: Diadelphous stamen, Dorsifixed anther found in Fabaceae.
 3. Name subscandent plant species of Combretaceae.
 4. Name the family of *Arjun* tree.
 5. Which family is known as the carrot family?
- (B)Answer in brief (any one):** **04**
1. Describe the structure of male cone of *Pinus*.
 2. Refer the genus to respective family giving reasons: *Ricinus*
- (c) Answer in detail (any one):** **07**
1. Write floral character and floral formula of *Amaryllidaceae* family.
 2. Describe internal structure of *Pinus* needle with diagram.
