



DCU-003-2011006

Seat No. _____

B. Sc. (Sem. I) (W.E.F. 2019) Examination

August - 2022

Botany

B-101 : Plant Diversity

Faculty Code : 003

Subject Code : 2011006

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

Instruction : Write any 5 questions out of 10 questions each of 14 marks.

- 1 (a) Each of **one** mark : 4
(1) What is Histology ?
(2) What is Genetics?
(3) Define: Taxonomy
(4) Define: Ecology
- (b) It is of **two** marks : 2
Write the types of pigments, storage food, components of cell wall and reproduction of Phaeophyta.
- (c) It is of **three** marks : 3
Explain: Cyanophyta
- (d) It is of **five** marks : 5
Describe Whittaker's **five** kingdom classification.
- 2 (a) Each of **one** mark : 4
(1) What is morphology?
(2) What is Cytology ?
(3) Define: Plant Physiology.
(4) Define: Anatomy
- (b) It is of **two** marks : 2
Write the types of pigments, storage food, components of cell wall and reproduction of Chlorophyta.
- (c) It is of **three** marks : 3
Explain: Rhodophyta
- (d) It is of **five** marks : 5
Describe with labelled diagram: Scalariform conjugation in Spirogyra.

- 3 (a) Each of **one** mark : 4
- (1) What is coenocytic cell ?
 - (2) What is columella?
 - (3) What is torula condition?
 - (4) What is the name of the membranous structure which joins stipe and pileus?
- (b) It is of **two** marks : 2
- What is plasmogamy? How many stages of Plasmogamy in Agaricus?
- (c) It is of **three** marks : 3
- What are main features of sub- division Myxomycotina ?
- (d) It is of **five** marks : 5
- Describe the vegetative structure and asexual reproduction in Mucor.
- 4 (a) Each of **one** mark : 4
- (1) Give local name of Mushroom
 - (2) Umbrella - shaped structure is called.
 - (3) By whom studied the sexual reproduction of Mucor?
 - (4) What is difference between Sporangiphore and Sporangiospores ?
- (b) It is of **two** marks : 2
- What is Karyogamy? Where Karyogamy is occurred in Agaricus?
- (c) It is of **three** marks : 3
- What are main features of sub-division Eumycotina?
- (d) It is of **five** marks : 5
- Describe the structure of the basidiocarp in Agaricus with the help of diagram.
- 5 (a) Each of **one** mark : 4
- (1) What is dioecious plant ?
 - (2) What type of cells are formed in Antheridium of Riccia?
 - (3) What type of cells are formed in Archegonium of Riccia?
 - (4) Is Riccia dorsiventral? How?
- (b) It is of **two** marks : 2
- What is the dominant phase of the Riccia life? Why?
- (c) It is of **three** marks : 3
- Write short note on: Spore dispersal in Riccia
- (d) It is of **five** marks : 5
- Explain the sporophyte of Riccia.

- 6 (a) Each of **one** mark : 4
- (1) Is the sporophyte parasite on gametophyte in Riccia? How?
 - (2) In what succession sex organs are developed in Riccia?
 - (3) Name the type of rhizoids in Riccia.
 - (4) What is anomaly?
- (b) It is of **two** marks : 2
Are bryophytes Amphibious plants ? Why?
- (c) It is of **three** marks : 3
Explain vegetative reproduction in Riccia
- (d) It is of **five** marks : 5
Describe the internal structure of thallus of Riccia with the help of a diagram.
- 7 (a) Each of **one** mark : 4
- (1) What is Eusporangiate?
 - (2) What is Siphonostele?
 - (3) What types of cells are in Sporangium wall of Nephrolepis ?
 - (4) What is epiphytic plant ?
- (b) It is of **two** marks : 2
Discuss: Leaves in Nephrolepis
- (c) It is of **three** marks : 3
Write note on : Hydathode
- (d) It is of **five** marks : 5
Describe with labelled diagram: Nephrolepis prothallus.
- 8 (a) Each of **one** mark : 4
- (1) What is Leptosporangiate?
 - (2) What is Protostele?
 - (3) What is Circinate vernation ?
 - (4) What is Indusium ?
- (b) It is of **two** marks : 2
Discuss: Rhizome in Nephrolepis
- (c) It is of **three** marks : 3
Write note on : Rementa
- (d) It is of **five** marks : 5
What are vascular cryptogams? Write the characteristic features of pteridophytes.

- 9** (a) Each of **one** mark : **4**
- (1) Write the Botanical name of 'Sago Palm'.
 - (2) What is the importance of sunken stomata ?
 - (3) How many celled stage of microspore when it is shedding on Ovule?
 - (4) What is shape and size of Antherozoid of Cycas?
- (b) It is of **two** marks : **2**
Write systematic position of Cycas with reasons.
- (c) It is of **three** marks : **3**
Write short note: Microsporophyll of Cycas.
- (d) It is of **five** marks : **5**
Describe : Internal structure of cycas leaflet with labelled diagram.
- 10** (a) Each of **one** mark : **4**
- (1) Is Cycas monoecious ? Why?
 - (2) Which is the tallest species of Cycas ?
 - (3) Define: Gymnosperm
 - (4) Which alga is present in coralloid root ?
- (b) It is of **two** marks : **2**
What is transfusion tissue ?
- (c) It is of **three** marks : **3**
Draw only labelled diagram : L.S. of Ovule in Cycas.
- (d) It is of **five** Marks : **5**
Describe : Internal structure of Cycas rachis with labelled diagram.
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