SHRI S.H. KELKAR COLLEGE OF ARTS, COMMERCE & SCIENCE, DEVGAD
SYBSC SEM-I EXAMINATION, OCT 2023
BOTANY PAPER I - PLANT DIVERSITY 1 (USBO101)
TIME -3HRs **TOTAL MARKS-100**

N.B.: (1) All questions are compulsory.
(2) Figures to the right indicate full marks.
(3) Draw neat and labeled diagrams wherever necessary.

Q.1 (A) FILL IN THE BLANKS **(10 MARK)**

1. The chloroplast in Spirogyra is:
   a) Disc shaped b)Spiral c) Peltate
2. In Aspergillus, the female sex organ is called:
   a) Ascogonium b) Archegonium c) Carpogonium
3. Q. 3 Mass of white, delicate, cottony threads collectively are known as:
   a) Mycelium b) Hyphae c) Columella
4. _____ are also called resting spores.
   a) heterocysts b) akinetes c) hormogones
5. Nostoc reproduces by _____ methods.
   a) vegetative & asexual b) vegetative & sexual c) sexual & asexual
6. The thallus of Rhizopus consists of
   a) Rhizoidal hyphae b) Stolons c) all of above
7. In which bryophyte member, the sporogonium consists of only the spherical capsule?
   a) Anthoceros b) Marchantia c) Riccia
8. In Riccia, how many rows of vertical cells form the neck of archegonia:
   a) 2 b) 4 c) 6
9. Sporophyte in liverworts is:
   a) fully independent b) partially independent c) fully dependent on the gametophyte
10. Reserve food material in Chlorophyta is _____
    a) oils & proteins b) proteins & starch c) starch & pyrenoids

Q 1 (B) Answer in one sentence **(10 marks)**

1. Which process involves the fusion of two Spirogyra filaments in a ladder-like manner?
2. What is the specialized cell type in Nostoc responsible for nitrogen fixation?
3. What is the mode of nutrition in fungi where they feed on dead organic matter?
4. Name the structure in Rhizopus that contains the gametangia.
5. Which structure in Riccia is responsible for the production of female garnetes?

Q. 2 Answer any two from the following: **(20 marks)**

(a) Describe sexual reproduction in Spirogyra.
(b) Give economic importance of algae as bio-fertilizers and food.
(c) Give the systematic position of Nostoc. Add a note on its occurrence and economic importance.
(d) With the help of neat and labeled diagrams explain different shapes of chloroplasts observed in Chlorophyceae.

Q. 3. Answer any two from the following: **(20 marks)**

(a) Describe asexual reproduction in Aspergillus.
(b) Give a detailed account of vegetative thallus and asexual reproduction Rhizopus.
(c) Describe the sex organs of Aspergillus.
(d) Give economic importance of fungi.

Q. 4. Answer any two from the following: **(20 marks)**

(a) Describe the external and internal structure of thallus in Riccia.
(b) Explain the gametophytic generation in Riccia.
(c) With the help of well labeled diagram, explain the alternation of generation in Riccia.
(d) Write a note on general characters of Hepaticae.

Q. 5. Write short notes on: (Any four) **(20 marks)**

(a) Alternation of generation in Riccia
(b) Sketch and label V. S. of thallus of Riccia
(c) Saprophytism as a mode of nutrition in fungi
(d) Systematic position of Rhizopus
(e) Algae as nutraceuticals
(f) Trichome of Nostoc