



D-003-001306

Seat No. _____

B. Sc. (Sem. III) (CBCS) Examination

March – 2022

B-301 : Botany

(Plant Diversity and Bio resources)

(Old Course)

Faculty Code : 003

Subject Code : 001306

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

[Total Marks : 70

- Instructions :** (1) This question paper contains three questions. All questions are compulsory.
(2) Write answers of all the questions in main answer sheet.
(3) Draw neat and labelled diagram wherever necessary.
(4) Figures to the right side indicated full marks for the questions.

1 Choose the correct answer from the given options : 20

- (1) What are the principal pigments present in *Batrachospermum* ?
(A) r-Phycoerythrin (B) Xanthophyll
(C) Chlorophyll (D) None of above
- (2) *Adiantum* is commonly known as
(A) Madian hair fern (B) *Nephrolepis*
(C) Horse tail (D) None of above
- (3) scientific name of Kesudo :
(A) *Butea monosperma* (B) *Butea arachidicola*
(C) *Zinziber officinalae* (D) None of above
- (4) *Pinus* stem shows :
(A) Resin duct (B) Latex duct
(C) Oil ducts (D) Hydathodes

- (5) The most primitive type of stele is :
 (A) Eustele (B) Solenostele
 (C) Protostele (D) Siphonostele
- (6) The number of teeth in each ring of peristome in Funaria is :
 (A) 8 (B) 12
 (C) 16 (D) 14
- (7) There are _____ cover cells in archegonia of Funaria.
 (A) 8 (B) 4
 (C) 5 (D) 9
- (8) Heterocyst are formed in :
 (A) Batrachospermum (B) Nostoc
 (C) Peziza (D) Adiantum
- (9) Peziza is commonly known as :
 (A) Cup fungi (B) Pin mould
 (C) Weed of laboratory (D) Bread mould
- (10) _____ algae possess parenchymatous thallus
 (A) Ulva (B) Vaucheria
 (C) Ulothrix (D) Volvox
- (11) _____ considered to be a light sensitive organelle which directs the movements of swimming algal cells.
 (A) Gas vacuole (B) Flagella
 (C) Endoplasmic reticulum (D) Eye spot
- (12) The number of ascospores in the ascus of Peziza is _____
 (A) 8 (B) 6
 (C) 4 (D) 10
- (13) Which of the following is caused by Pythium ?
 (A) Damping off Tobacco (B) Powdery mildew of Peas
 (C) Damping off Apple (D) Wart disease of Potato
- (14) Which of the following part is present in the mature sporophyte of Anthoceros?
 (A) Foot (B) Seta
 (C) Capsule (D) All of above
- (15) Bryophyte does not possess _____ vegetative reproduction.
 (A) By gemmae (B) By tubers
 (C) By primary protonema (D) Fusion of gametes
- (16) Which of the following is not characteristic of Pythium mycelium ?
 (A) Hyaline
 (B) Unbranched
 (C) Septa are formed on the old parts of mycelium
 (D) Coenocytic

- (17) Dominant pigment of Nostoc algae is :
 (A) Fucoxanthin (B) c Phycocyanin
 (C) r Phycocyanin (D) Carotenoids
- (18) The fruiting body of Peziza is :
 (A) Cleistothecium (B) Apothecium
 (C) Perithecium (D) Ascocarp
- (19) Which of the following colony look like branches of plant ?
 (A) Palmelloid (B) Dendroid
 (C) Coenobial (D) None of above
- (20) In which forms reserve food material is stored by fungus ?
 (A) Glucose (B) Starch
 (C) Glycogen (D) None of above

2 (A) Answer in brief : (Any Three) 6

- (1) Give outline of classification of Peziza.
- (2) Explain the term ethnobotany.
- (3) What is heterospory?
- (4) Explain any two methods of vegetative reproduction, which are found in bryophytes ?
- (5) Which type of vascular bundle is found in Pinus root ?
- (6) Draw a labelled diagram of Eukaryotic cell structure of algae.

(B) Answer Any Three : 9

- (1) Explain reproduction in Peziza.
- (2) Describe the economic importance of bryophytes.
- (3) Write a note on Adiantum prothallus.
- (4) Describe-Wood catechu (Katha) as dye yielding plant.
- (5) Explain the internal structure of Pinus needle.
- (6) Describe Nostoc cell structure.

(C) Answer in detail : (Any Two) 10

- (1) What is stele ? Describe various types of stele.
- (2) Describe sexual reproduction in Batrachospermum.

- (3) Explain the internal structure of Adiantum root.
- (4) Explain Pinus male cone
- (5) Give systematic position, distinguishing characters of Verbenaceae family with floral formula and diagram.

3 (A) Answer in brief : (Any Three) 6

- (1) Write a note on Scale leaves of Pinus.
- (2) Write the floral formula of Apocynaceae family.
- (3) Write note on : Siphonaceous thallus structure.
- (4) Draw a labelled diagram of internal structure of Anthoceros thallus.
- (5) State the location and function of peristomial teeth.
- (6) Give the scientific name of any two plants belong to Combretaceae family.

(B) Answer Any Three : 9

- (1) Describe leaves of Heena as dye yielding plants.
- (2) Write note morphology of Pinus.
- (3) Explain Adiantum sori.
- (4) Give an account of mushroom cultivation.
- (5) Explain the ultra-structure of fungal cells.
- (6) Describe the structure of Anthoceros archegonium.

(C) Answer in detail : (Any Two) 10

- (1) Write an essay on the harmful effects of algae, which causing biological disturbance.
- (2) Write scientific name, family and economic importance of Coconut.
- (3) Describe Internal structure of Adiantum stem
- (4) Explain Internal structure of Pinus root.
- (5) Explain the structure of sporophyte of Funaria.