

B.Sc. Semester - 3 (CBCS) Examination**Oct/Nov. -2018****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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- Que-1 (A) Answer in detail. (Attempt any one) (07)
- (i) Explain: vegetative and asexual reproduction in Nostoc.
 - (ii) Discuss the sexual reproductive organs, fertilization and post-fertilization changes in Batrachospermum.
- (B) Answer in brief: (Attempt any one) (04)
- (i) Describe the harmful roles of algae.
 - (ii) Write notes on: coenobial and palmelloid forms.
- (C) Answer in very short. (Attempt any three) (03)
- (i) What are whiplash or acronematic flagella?
 - (ii) Give the term: The luxuriant growth of planktonic algae in water bodies.
 - (iii) Name the spore reproduce asexually by Javenile plant of Batrachospermum.
 - (iv) What is glomerule?
 - (v) Name the alga which do not reproduce sexually.
- Que-2 (A) Answer in detail: (Attempt any one) (07)
- (i) Describe the vegetative structure and asexual reproduction in Aspergillus.
 - (ii) Explain: Industrial applications of saccharomyces.
- (B) Answer in brief: (Attempt any one) (04)
- (i) Describe the vegetative reproduction is saccharomyces.
 - (ii) Explain: Sexual reproductive organs in Asperigillus.
- (C) Answer in very short: (Attempt any three) (03)
- (i) What is the name of fruiting body of Aspergillus?
 - (ii) Name the concave scar retained by the newly formed daughter cell in yeast.
 - (iii) Fill up the blanks: In Fungi, the septa usually have simple pore but in Basidiomycetes septa have a complex pore is called _____.
 - (iv) Name the process in which sugar is broken down to in ethyl alchohol and carben dioxide by yeast cells.
 - (v) True or False: In Aspergillus the antheridium is Unicellular.
- Que-3 (A) Answer in detail: (Attempt any one) (07)
- (i) With the help of suitable diagrams describe the Internal structure of sporophyte in Funaria.
 - (ii) Describe the External & Internal characteristic in Marchantia.
- (B) Answer in brief: (Attempt any one) (04)
- (i) Discuss: Primary protonema & secondary protonema.
 - (ii) Discuss: Bryophytes as source of food.
- (C) Answer in very short: (Attempt any three) (03)
- (i) Give the nature of elater in Marchantia.
 - (ii) Name the term used for funaria bearing antheridia and archegonia on different branches of the same plant.
 - (iii) Name layers of protective covering envelope the sporophyte of Marchantia.
 - (iv) How many thalli may be produced from germination of a gemma?
 - (v) Which bryophyte is used as surgical ped due to antiseptic and absorptive power?
- Que-4 (A) Answer in detail (Attempt any one) (07)
- (i) Give the illustrated account of the spore producing organs in selaginella.
 - (ii) What is telome? Explain the origin of sporophylls in Lycopsida and sphenopsida.
- (B) Answer in brief: (Attempt any one) (04)
- (i) Discuss: Ectophloic and Amphiphloic siphonostele.
 - (ii) Explain: External morphology of sporophyte in Adiantum.

- (C) Answer in very short: (Attempt any three) (03)
- (i) Name the type of venation in the leaflets of *Adiantum*.
 - (ii) Name the leafless, cylindrical structure arise lowerside of the stem at point of dichotomy in *selaginella*.
 - (iii) Name the stele proto in which xylem is divide to in a number of longitudinal plates.
 - (iv) Complete the statement: The 'curvation' process in the telome concept is divided in to two sub-processes, namely incurvation and _____.
 - (v) Name the phenomenon where two types of spores differing in size, structure and function are formed on the same plant.
- Que-5 (A) Answer in detail: (Attempt any one) (07)
- (i) Describe the internal structure of *pinus* needle.
 - (ii) Give salient feature, floral formula and floral diagram of family *combretaceae*.
- (B) Answer in brief: (Attempt any one) (04)
- (i) Explain: microsporophyll in *pinus*.
 - (ii) Refer the genus to respective family giving reasons: *pancratium*.
- (C) Answer in very short: (Attempt any three) (03)
- (i) Which type of aestivations found in family *Fabaceae*?
 - (ii) Sixteen celled proembryo is divided in to four tiers in *Pinus*, Name it.
 - (iii) Which type of pollination is found in *pinus*?
 - (iv) Write the floral formula of *vebenaceae* family.
 - (v) In which genus *cyathium* is a characteristic inflorescence?
