



**MAS-003-001306**

Seat No. \_\_\_\_\_

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

**October / November – 2016**

**Botany : B-301**

*(Plant Diversity & Bio-resources)*

**Faculty Code : 003**

**Subject Code : 001306**

Time : 2½ 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 indicates full marks for the questions.

1 Objective type questions : 20

- (1) Explain the term : Eucarpic thallus.
- (2) Name the micro-organism responsible for damping off seedlings of tomato.
- (3) Which type of pollination is found in Pinus?
- (4) Why the species of Adiantum is commonly known as 'Maiden hair fern'?
- (5) What is the location and function of Resin duct in Pinus root?
- (6) Write the scientific name and family of Kesudo.
- (7) Name the two growth stages of gametophyte in the life cycle of Funaria.
- (8) Arrange the following portion from base to apex in the sporogonium of Funaria — Operculum, seta, capsule, foot.

- (9) What are the principal pigments present in *Batrachospermum*?
- (10) Give the name of a symbiotic alga found in *Anthoceros*.
- (11) Name the alga showing parenchymatous thallus.
- (12) The juvenile plant of *Batrachospermum* reproduces asexually by \_\_\_\_\_.
- (13) *Anthoceros* are commonly known as \_\_\_\_\_.
- (14) There are \_\_\_\_\_ cover cells in archegonia of *Funaria*.
- (15) What type of stele is observed in the root of *Adiantum*?
- (16) Which eukaryotic cell organelle of algae is associated with the synthesis and storage of starch?
- (17) What is the dominant phase of the life – cycle of bryophyte?
- (18) Assign any one of the following plants to the respective family :
  - (1) *Terminalia chebula*
  - (2) *Brassica juncea*.
- (19) In which forms reserve food material is stored by fungus?
- (20) What is Mycelium?

2 (a) Answer in brief : (any **three**)

6

- (1) Describe the vegetative body of *Pythium*.
- (2) Write the floral formula and draw a floral diagram of *Verbenaceae* family.
- (3) Explain: *Anthoceros* antheridia.
- (4) Write the features of *Pinus* pollen with diagram.
- (5) What is heterospory?
- (6) Draw a labelled diagram of Prokaryotic cell structure of algae.

- (b) Answer any **three** : **9**
- (1) Give the classification of Peziza with reason.
  - (2) Discuss the mechanism of dehiscence of capsule in Funaria.
  - (3) Explain the morphological features of Adiantum.
  - (4) Write the scientific name and uses of Coconut.
  - (5) Explain the internal structure of Pinus young root.
  - (6) Give an account of mushroom cultivation.
- (c) Answer in detail : (any **two**) **10**
- (1) Describe sexual reproduction in Pythium.
  - (2) Describe thallus structure and reproduction in Nostoc.
  - (3) Give illustrative account of various types of steles.
  - (4) Discuss the theory of rise and fall of Gymnosperm.
  - (5) Give distinguishing characters of Amaryllidaceae family with floral formula and floral diagram.
- 3** (a) Answer in brief : (any **three**) **6**
- (1) Write any two harmful effects of algae, which causing biological disturbance.
  - (2) Draw only labelled diagram of Adiantum leaflet.
  - (3) Mention the uses of Heena.
  - (4) Describe the fertilization process of Bryophyte.
  - (5) Describe the branches of Pinus.
  - (6) Write the habitat of Peziza.
- (b) Answer any **three** : **9**
- (1) Give scientific name and economic importance of wood catch.
  - (2) Write a short note on : Female cone of Pinus.
  - (3) Describe the spore bearing organ in Adiantum.
  - (4) Explain the thallus of Batrachospermum.
  - (5) Describe the structure of Peziza apothecium.
  - (6) What is vegetative reproduction? Discuss methods of vegetative reproduction of bryophytes you have studied.

- (c) Answer in detail : (any **two**) **10**
- (1) Describe sexual reproduction in *Batrachospermum*
  - (2) Give distinguishing characters of Apocynaceae family with floral formula and floral diagram.
  - (3) Explain telome theory with diagram.
  - (4) With the help of suitable diagram describe the anatomy of *Pinus* needle.
  - (5) Explain gametophytic phase of *Funaria*.
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