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BSc3BotC301x
B.Sc. Semester - 3 (CBCS) Examination
Oct/Nov. -2019 [NEW COURSE]
Botany-B301 (Core)

Seat No : _____

Time: 2:30 Hours

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate marks.

Marks: 70

Q-1 Give the answer of following questions.

(A) Answer the following question very shortly

(1) State difference between "Akinete" and "Heterocyst". (14)

(2) Why the color of *Batrachospermum* is violet or green even though it comes under Rhodophyceae class? (04)

(3) Give the two names of un-branched filaments algae.

(4) Give the classification of *Nostoc*.

(B) Shortly answer any one question

(1) Describe thallus structure of *Batrachospermum*. (03)

(2) Describe cell structure of *Batrachospermum*.

(C) Answer any one question in detail

(1) Describe mature structure of spermatangium and carpogonium in *Batrachospermum*. (07)

(2) Discuss post fertilizations changes and carpospores germination in *Batrachospermum*.

Q-2 Give the answer of following questions.

(A) Answer the following question very shortly

(1) Give the name of any two diseases caused by *Aspergillus*. (14)

(2) Define relationship between phialides and sterigmata in *Aspergillus*? (04)

(3) Define lomasome?

(4) Which two types of enzymes secreted by Yeast for nutrition?

(B) Shortly answer any one question

(1) Discuss budding in Yeast. (03)

(2) State the industrial application of *Aspergillus* and describe any one.

(C) Answer any one question in detail

(1) Describe different types of life cycle in Yeast. (07)

(2) Sexual reproduction in *Aspergillus*.

Q-3 Give the answer of following questions.

(A) Answer the following question very shortly

(1) How many thalluses can produce by germination of Gamme in *Marchantia*? (14)

(2) How can we morphologically differentiate male and female thallus of *Marchantia*? (04)

(3) During which phase in life cycle of *Marchantia* reduction division occurs?

(4) How many peristome teeth are present in *Funaria*?

(B) Shortly answer any one question

(1) Describe cross section of *Marchantia* thallus. (03)

(2) Describe L. S. of *Funaria* archegonia.

(C) Answer any one question in detail

(1) Describe mature structure of *Marchantia* sporophyte. (07)

(2) Describe mature structure of *Funaria* sporophyte.

Q-4 Give the answer of following questions.

- (A) **Answer the following question very shortly**
- (1) What is ligule?
 - (2) In *Selaginella*, xylem is usually made of tracheids and vessels are absent.
- True or False?
 - (3) Which type of stele is observed in root of *Adiantum*?
 - (4) How many flagella are present in antherozoids of *Adiantum*?
- (B) **Shortly answer any one question**
- (1) Discuss importance of heterospory
 - (2) Describe Protostele and Haplostele
- (C) **Answer any one question in detail**
- (1) Describe L. S. of *Selaginella* strobilli.
 - (2) Describe internal structure of *Adiantum* sporophyll.

Q-5 Give the answer of following questions.

- (A) **Answer the following question very shortly**
- (1) Which types of leaves are present in *Pinus*?
 - (2) Why the wood of *Pinus* is known as nonporous?
 - (3) In ground nut flowers are situated above ground but still fruits are produce underground
- explain the statement.
 - (4) Give any two scientific name of Apiaceae family.
- (B) **Shortly answer any one question**
- (1) Describe the floral characters which come under Myrtales order.
 - (2) Describe the floral characters which come under unisexual series.
- (C) **Answer any one question in detail**
- (1) Describe the Amaryllidaceae family with morphological characters, floral diagram, floral formula and any two examples.
 - (2) Describe L.S. of female cone of *Pinus*.
