

P - I (1+1+1) H / 20 (N)

2020

## BOTANY (Honours)

Paper Code : I - A & B

[New Syllabus]

### Important Instructions for Multiple Choice Question (MCQ)

- Write Subject Name and Code, Registration number, Session and Roll number in the space provided on the Answer Script.

**Example :** Such as for Paper III-A (MCQ) and III-B (Descriptive).

Subject Code : 

III	A	&	B
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Subject Name :

- Candidates are required to attempt all questions (MCQ). Below each question, four alternatives are given [i.e. (A), (B), (C), (D)]. Only one of these alternatives is 'CORRECT' answer. The candidate has to write the Correct Alternative [i.e. (A)/(B)/(C)/(D)] against each Question No. in the Answer Script.

**Example** – If alternative A of 1 is correct, then write :

1. – A

- There is no negative marking for wrong answer.

## মাল্টিপল চয়েস প্রশ্নের (MCQ) জন্য জরুরী নির্দেশাবলী

- উত্তরপত্রে নির্দেশিত স্থানে বিষয়ের (Subject) নাম এবং কোড, রেজিস্ট্রেশন নম্বর, সেশন এবং রোল নম্বর লিখতে হবে।

উদাহরণ — যেমন Paper III-A (MCQ) এবং III-B (Descriptive)।

Subject Code : 

III	A	&	B
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Subject Name :

- পরীক্ষার্থীদের সবগুলি প্রশ্নের (MCQ) উত্তর দিতে হবে। প্রতিটি প্রশ্নে চারটি করে সম্ভাব্য উত্তর, যথাক্রমে (A), (B), (C) এবং (D) করে দেওয়া আছে। পরীক্ষার্থীকে তার উত্তরের স্বপক্ষে (A)/(B)/(C)/(D) সঠিক বিকল্পটিকে প্রশ্ন নম্বর উল্লেখসহ উত্তরপত্রে লিখতে হবে।

উদাহরণ — যদি 1 নম্বর প্রশ্নের সঠিক উত্তর A হয় তবে লিখতে হবে :

1. – A

- ভুল উত্তরের জন্য কোন নেগেটিভ মার্কিং নেই।

**Paper Code : I - A**

Full Marks : 14

Time : Twenty Minutes

Choose the correct answer.

Each question carries 1 mark.

1. Mannitol is a reserved food found in —
  - (A) *Gracillaria*
  - (B) *Porphyra*
  - (C) *Chara*
  - (A) *Fucus*
  
2. Which of the following contains chlorophyll a, b, phycoerythrin and phycocyanin?
  - (A) Chlorophyta
  - (B) Phaeophyta
  - (C) Rhodophyta
  - (D) Bacillariophyta
  
3. Auxospore formation is found in —
  - (A) Diatom
  - (B) *Chara*
  - (C) *Polysiphonia*
  - (D) *Fucus*
  
4. The symbiotic association of algae and fungi is known as —
  - (A) Mycorrhiza
  - (B) lichen
  - (C) Mycoplasma
  - (D) Both (A) and (B)

5. Lichens are the major pollution indicators of —
- (A) SO<sub>2</sub>
  - (B) NO<sub>2</sub>
  - (C) Mercury
  - (D) CO
6. *Usnea* is a —
- (A) foliose lichen
  - (B) fruticose lichen
  - (C) crustose lichen
  - (D) filamentous lichen
7. Origin and evolution of sex in algae is best seen in —
- (A) Blue green algae
  - (B) Green algae
  - (C) Red algae
  - (D) Brown algae
8. Fungi usually store the reserve food material in the form of —
- (A) Starch
  - (B) Lipid
  - (C) Glycogen
  - (D) Protein
9. Fungi producing usually eight spores in a sac like structure belong to —
- (A) Phycomycetes
  - (B) Ascomycetes
  - (C) Basidiomycetes
  - (D) Deuteromycetes

10. Aflatoxin is produced by —
- (A) Bacteria
  - (B) Virus
  - (C) Fungi
  - (D) Nematode
11. “Perfect stage” of a fungus means —
- (A) When the fungus is perfectly healthy
  - (B) When it reproduces asexually
  - (C) When it reproduces sexually
  - (D) None of the above
12. IPM is —
- (A) Induced Pest Management
  - (B) Integrated Pest Management
  - (C) Inhibitory Pest management
  - (D) None of the above
13. Tungro disease of rice is caused by —
- (A) Bacteria
  - (B) PPLO
  - (C) Virus
  - (D) Fungi
14. Which of the following is a pathogen related protein?
- (A) Albumin
  - (B) Calmodulin
  - (C) PR protein
  - (D) All of the above
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2020

## BOTANY (Honours)

Paper Code : I - B

[New Syllabus]

Full Marks : 56

Time : Two hours forty Minutes

*The figures in the margin indicate full marks.*

### Group - A

1. Answer any *two* of the following : 4×2 = 8
  - (i) Write the source and uses of diatomite. 1+3
  - (ii) Describe the mode of asexual reproduction observed in *Anabaena* sp. 4
  - (iii) Discuss the economic importance of lichen. 4
  - (iv) Write algal source and use of the following : 2+2
    - (a) Agar
    - (b) Algin
  
2. Answer any *two* of the following : 10×2 = 20
  - (i) Discuss on the origin and evolution of sex in algae. 5+5
  - (ii) Give an account of structure and function of heterocyst of cyanobacteria. 8+2
  - (iii) Comment on the reproductive structure of Crustose lichens. Mention the types based on their morphology of the thallus citing one example for each type. 4+6
  - (iv) Give an account of the post fertilization changes of *Polysiphonia*. Why is the life cycle of *Polysiphonia* triphasic in nature? 7+3

**Group - B**

3. Answer any *two* of the following: 4×2=8
- (i) Write a brief note on Koch's postulate. 4
  - (ii) What is heterothallism? Distinguish between bipolar heterothallism and tetrapolar heterothallism. 1+3
  - (iii) Write the fungal sources and uses of the following : 2+2
    - (a) Amylase
    - (b) Tryptophan
  - (iv) Describe the role of mycorrhiza in Agriculture. 4
- 4 .Answer any *two* of the following 10 ×2 = 20
- (i) Discuss the symptoms, causal organism, disease cycle and control measures of 'Late blight of disease. 2+1+3+4
  - (ii) What is parasexual cycle? Describe the cycle by citing example. What is crozier formation? 1+6+3
  - (iii) Write down the characters of Ascomycotina and Deuteromycotina according to the classification scheme of Ainsworth (1973). 5+5
  - (iv) Describe the different parts of a mature basidiocarp in Agaricus. What do you mean by button stage? 8+2
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