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BOTANY PAPER - I : BOT-111
Bacteria, Viruses and Algae
(114101)

Time : Two Hours

Max. Marks : 60

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Figures to the right indicate full marks.
5. All questions are compulsory.
6. Draw neat diagrams wherever necessary.

6

a) Pasteur b) Koach
c) T. J. Burrill d) Anton Van Leeuwenhoek

a) Bacteria b) Cyanobacteria
c) Bluegreen algae d) All the above

a) Virus b) Bacteria
c) Algae d) None of these

a) Cholera b) Typhoid
c) Diphtheria d) Influenza

a) Chitin b) Cellulose
c) Pectin d) Glycogen

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P.T.O.

- vi) Members of Bacillariophyceae are commonly called as -----.
- | | |
|----------------|------------------|
| a) Blue greens | b) Diatoms |
| c) Green algae | d) None of these |
- vii) Chloroplast is Ribbon-Shaped in -----.
- | | |
|---------------------|---------------------|
| a) <u>Cosmarium</u> | b) <u>Zygnema</u> |
| c) <u>Spirogyra</u> | d) <u>Mougeotia</u> |
- viii) The product of photo synthesis in Sargassum is -----.
- | | |
|-------------|-------------|
| a) Starch | b) Protein |
| c) Mannitol | d) Glycerol |

b) Attempt the following **any six**.

6

- i) What are the parasitic bacteria?
- ii) Who discovered the bacterial staining procedure?
- iii) Who introduced the term 'Virus' in microbiology?
- iv) What is capsid?
- v) Define algae.
- vi) What is reserve food material in brown algae?
- vii) What is the common name of Spirogyra?
- viii) Explain vegetative reproduction in Sargassum.

2. Attempt the following **any six**.

12

- i) Budding in Bacteria.
- ii) Name the bacterial diseases in plants (only two).
- iii) Any two nonliving characters of viruses.
- iv) Sketch and label helical virus.
- v) Palmella stage.
- vi) Name any two classes of algae in which motile cells are absent.

vii) Vegetative reproduction in Spirogyra.

viii) Systematic position of Sargassum.

ix) Give the source of Agar-agar.

3. Attempt the following **any four**.

12

i) Sketch and label the ultra structure of a bacterial cell.

ii) Sketch and label the ultra structure of a bacteriophage.

iii) Write a short note on symbiotic algae.

iv) Write a short account on Charophyceae.

v) Describe the plant body of Spirogyra.

vi) Describe the external morphology of Sargassum.

4. Attempt the following **any three**.

12

i) Describe the process of Gram staining of Bacteria.

ii) Give symptoms and control measures of leaf curl disease of tomato.

iii) Give the general characters of algae.

iv) Describe the direct lateral conjugation in Spirogyra.

v) Describe the internal structure of thallus of Sargassum.

5. Attempt the following **any two**.

12

i) Give the general characteristic of Viruses.

ii) Give the outline classification of Algae upto classes as given by G.M. Smith with suitable examples of each.

iii) Write on bacterial disease. Citrus canker wrt to causal organism. Symptoms and control measures.
