1955 E

B.Sc. (Prog.)/II

Bio – 202 : Biology of Plants : Form, Structure and Function

(Admissions of 2008 and onwards)

Time : 3 Hours **Maximum Marks : 75**

(Write your Roll No. on the top immediately on receipt of this question paper)

Attempt any 5 questions

All questions carry equal marks

All parts of a question should be answered together

Q. 1. (a) How is water absorbed by a plant. How does it reach the top of the plant? **10**

(b) Write a short note on biological nitrogen fixation **5**

OR

Discuss the economic importance of fungi. **5**

Q. 2. **Write short notes on any three of the following:** **3×5=15**

(a) Structure of bacteriophage

(b) High frequency recombination (Hfr) in bacteria

(c) Biosystematics

(d) Coenocytic thallus of *Vaucheria*

(e) Basidiocarp of *Agaricus*

Q. 3. **Differentiate between the following (any three):** **3×5=15**

(a) Generalised and specialized transduction

(b) Apogamy and Apospory

(c) Dicot and Monocot Stem

(d) Bryophyte and Pteridophyte

Q. 4. (a) Write the scientific name, family and the plant part/product of economic importance of the following **(any three)**: **3×2=6**

(i)Rice (ii) Rubber (iii) Mustard (iv) Cotton

(b) Draw well labeled diagram/s of the following **(any two)**: 2×**2.5=5**

(i) V.S. sporophyte of *Funaria*

(ii) V.S. Barberry leaf passing through spermogonium

(iii) L.S. strobilus *Selagenella*

(c) Fill in the blanks **(any four):** **1×4=4**

(i) The bacterial cell wall is made up of _____ .

(ii) _____ is a single stranded RNA virus.

(iii) The antibiotic penicillin is obtained from _____.
(iv) In bryophytes the main plant body is _____.
(v) The negatively geotropic roots of *Cycas* are called _____.

Q. 5. **Briefly explain (any three).** **3×5=15**
(a) Glycolysis
(b) Mineral deficiency.
(c) Carbon dioxide fixation in CAM plants.
(d) Sexual reproduction in *Rhizopus*.
(e) Photosynthetic pigments.

Q. 6. **Answer of the following (any two):** **2×7.5 = 15**
(a) Comment on the merits and demerits of Takhtajan's system of classification.
(b) Write a note on pentose-phosphate pathway.
(c) Discuss the role of phytochromes in plants.

Q. 7. (a) List the anatomical features that help a xerophyte to adapt to its environment. **5**
(b) Discuss the Triphasic life cycle of *Polysiphonia*. **5**
(c) What are the diagnostic features of Pteridophytes. **5**