

5215B

Your Roll No. _____

J

B.Sc. (Prog.)/II

Bio-202 - Biology of Plant · Form, Structure
and Function

(Admissions of 2008 and onwards)

Time · 3 Hours

Max. Marks 75

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

Attempt any five questions. All questions carry equal marks.

Q 1 Write short notes on any three : 3 x 5 =15

- (i) Mechanism of opening and closing of stomata
- (ii) Vernalization
- (iii) Mitochondrial Electron transport chain
- (iv) Bioassay for auxins
- (v) Long day plants

Q.2 Differentiate between any three . 3 x 5 =15

- (i) C₃ and C₄ plants
- (ii) Macro and micronutrients
- (iii) Lytic and lysogenic cycles
- (iv) Cell walls of Gram ⁺ve and Gram ⁻ve Bacteria
- (v) Stratification & Scarification.

Q.3 (a) With the help of well-labelled diagrams, compare 5
the anatomical characters of a monocot stem with that of
the dicot stem.

(b) Briefly comment on the similarities and differences 10
between Pteridophytes and Gymnosperms

Q.4 Comment on any three · 3 x 5 = 15

- (i) Economic importance of Pteridophytes.
- (ii) Salient features of Bryophytes
- (iii) Conjugation in Bacteria

- (iv) Transmission of Viruses.
- (v) Economic importance of fungi.
- (vi) Reproduction in Lichens.

- Q.5 (a) Draw well-labelled diagrams of any three: $3 \times 4 = 12$
- (i) T.S. coralloid root of Cycas.
 - (ii) E.M. of TMV.
 - (iii) E.M. of a Bacterium.
 - (iv) T.S. female cone of Pinus.
 - (v) V.S. of Lichen thallus.
- (b) Name the various constituents of Xylem and also mention their functions. 3
- Q.6 (a) Give an outline of the natural system of classification studied by you. Write any two merits and demerits of this system. 6
- (b) Comment briefly on the principles of Binomial Nomenclature. 5
- (c) Discuss the concept of taxonomic hierarchy. 4
- Q.7 (a) Write down the botanical name, family, plant part used and uses of any two of the following: $2 \times 3 = 6$
- (i) Tea (ii) Rubber (iii) Teak (iv) Cuichona
- (b) Give an account of the economic importance of algae. 5
- (c) Comment on the Carl Woese's system of Classification. 4