

8. Write the Botanical names, Systematic position and economic importance of the following :

- (a) Turmeric
- (b) Black pepper
- (c) Emblica
- (d) Tea
- (e) Beet root
- (f) Jute
- (g) Bajra
- (h) Safflower
- (i) Rubber
- (j) Sugar cane.

10×6=60

Total No. of Printed Pages : 4

Roll No.

1[CCE.M]1

Botany–II

(04)

Time : Three Hours

Maximum Marks : 300

INSTRUCTIONS

- (i) Answers must be written in English.
- (ii) The number of marks carried by each question is indicated at the end of the question.
- (iii) The answer to each question or part thereof should begin on a fresh page.
- (iv) Your answers should be precise and coherent.
- (v) The part/parts of the same question must be answered together and should not be interposed between answers to other questions.
- (vi) Candidates should attempt question nos. **1** and **5** which are compulsory and any **three** questions more out of the remaining questions, selecting at least **one** question from each section.
- (vii) If you encounter any typographical error, please read it as it appears in the text book.
- (viii) Candidates are in their own interest advised to go through the General Instructions on the back side of the title page of the Answer Script for strict adherence.

- (ix) No continuation sheets shall be provided to any candidate under any circumstances.
- (x) Candidates shall put a cross (X) on blank pages of Answer Script.
- (xi) No blank page be left in between answer to various questions.

SECTION–A

1. Write notes on any **six** of the following :
 - (a) Gene expression
 - (b) Prokaryotic cell
 - (c) Metaphase
 - (d) Golgi complex
 - (e) Structural variations in chromosome
 - (f) Copy choice theory
 - (g) One gene one polypeptide concept
 - (h) Southern blotting. 6×10=60
2. (a) Describe the structure and function of Plasma membrane.
- (b) Write a comparative account of replication of DNA in Prokaryotes and Eukaryotes.
- (c) Describe the morphology and chemical composition of interphase nucleus. 3×20=60
3. (a) What are chromosomal aberrations and how do they arise ?
- (b) What are Transposons ? Write an essay about different types of transposons and their significance.
- (c) What are polyploids ? Write an essay on polyploids with reference to Mutations. 3×20=60

4. (a) Write an account of cyclic and non-cyclic electron transport in light phase and explain how ATP is formed in the light phase.
- (b) Write an essay on Glycolysis or describe EMP pathway.
- (c) Give a brief account of biological nitrogen fixation.

3×20=60

SECTION–B

5. Write notes on any **six** of the following :
 - (a) Photorespiration
 - (b) Afforestation
 - (c) Vernalization
 - (d) Ozone layer depletion
 - (e) Seed Dormancy
 - (f) Translation of RNA
 - (g) SAT Chromosome
 - (h) Eutrophication. 6×10=60
6. (a) Describe Growth Substance and explain its role and applications in agri-horticulture.
- (b) Define Photoperiodism. Discuss the phenomenon with reference to short day and long day plants.
- (c) What are macro nutrients ? Describe their role in plants. 3×20=60
7. (a) Make a list of Drug Yielding plants of India and the various ways these are utilized.
- (b) Define xerophytes and explain briefly xerophytes along with their survival mechanisms.
- (c) Describe any two important Biodiesel plant. 3×20=60