8. Write the botanical names, systematic position and economic importance of the following: any six **(6×10=60)**

a) Saffron

b) Cotton

c) Opium

d) Soyabean

e) Clove

f) Ginger

g) Wheat

h) Coffee

i) Sacred basil.

j) Mustard.

[Total No. of Pages : 4 Roll No_____

1(CCE-M)4

BOTANY - II

[04]

Time : 3 Hours **Maximum Marks : 300**

INSTRUCTIONS

i) Answer 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 answer 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 five questions Q No: 1and 5 are compulsory

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.*

xii) *No programmable calculator is allowed.*

xiii) *No stencil (With different markings) is allowed.*

SECTION-A

1. Write notes on any **six of** the following: **(6×10=60)**
   a) Chloroplast
   b) Auto radiography.
   c) Polytene chromosome
   d) Recombinant DNA technology.
   e) Polymerase chain reaction.
   f) Photorespiration.
   g) Vernalization.
   h) Endangered plants
2. a) Describe the process of meiosis and its significance **(3×20=60)**
   b) Explain in detail the Nucleo some model of DNA
   c) What is Aneuploidy? Describe the types of Aneuploidy.
3. a) Write an account of ascent of sap in plants. **(3×20=60)**
   b) Discuss the basic differences among tactic, tropic and nastic movements in plants.
   c) What is photophosphorylation? Give an account of cyclic and non-cyclic photophosphorylation.

4. a) Describe the types of structural changes in chromosome. **(3×20=60)**
   b) Explain the operon model for regulation of gene activity.
   c) Describe the characteristics of Genetic code.

SECTION-B

5. Write notes on any **Six** of the following: **(6×10=60)**
   a) Karyotype and Idiogram.
   b) Xero sere
   c) Shola vegetation
   d) Alkaloids
   e) Organic evolution.
   f) Arena curvature test.
   g) Photosynthetic pigments
   h) Respiratory Quotient.
6. a) Define the term pollution. Write an essay on types of pollution and its control methods. **(3×20=60)**
   b) What in male sterility? Describe the types of male sterility in plants.
   c) Describe the significance of biological Nitrogen Fixation.
7. a) Explain the wood and fiber yielding plants. **(3×20=60)**
   b) What is gene transfer? Explain Agrobacterium tumefaciens mediated gene transfer.
   c) What is pedigree analysis? How are pedigree charts used in human genetics? Explain.