

SEMESTER VI**4 Papers****Total 100 x 4 = 400 Marks****II. BOTANY SPECIFIC (DSE 3):**

(Credits: Theory-04, Practicals-02)

Marks : 25 (MSE: 1Hr) + 75 (ESE: 3Hrs) =100**Pass Marks: Th (MSE +ESE) = 40****Instruction to Question Setter for****Mid Semester Examination (MSE):**

There will be **two** group of questions. **Group A is compulsory** and will contain five questions of **very short answer type** consisting of 1 mark each. **Group B will contain descriptive type** six questions of five marks each, out of which any four are to answer.

End Semester Examination (ESE):

There will be **two** group of questions. **Group A is compulsory** and will contain two questions. **Question No.1 will be very short answer type** consisting of ten questions of 1 mark each. **Question No.2 will be short answer type** of 5 marks. **Group B will contain descriptive type** six questions of fifteen marks each, out of which any four are to answer.

Note: There may be subdivisions in each question asked in Theory Examinations.

PLANT BREEDING**Theory: 60 Lectures****Unit 1: Plant Breeding**

Introduction and objectives. Breeding systems: modes of reproduction in crop plants. Important achievements and undesirable consequences of plant breeding.

(10 lectures)**Unit 2: Methods of crop improvement**

Introduction: Centres of origin and domestication of crop plants, plant genetic resources; Acclimatization; Selection methods: For self pollinated, cross pollinated and vegetatively propagated plants; Hybridization: For self, cross and vegetatively propagated plants – Procedure, advantages and limitations.

(20 lectures)**Unit 3: Quantitative inheritance**

Concept, mechanism, examples of inheritance of Kernel colour in wheat, Skin colour in human beings. Monogenic vs polygenic Inheritance.

(10 lectures)**Unit 4: Inbreeding depression and heterosis**

History, genetic basis of inbreeding depression and heterosis; Applications.

(10 lectures)**Unit 5: Crop improvement and breeding**

Role of mutations; Polyploidy; Distant hybridization and role of biotechnology in crop improvement.

(10 lectures)