

SEMESTER-IV

**SKILL ENHANCEMENT COURSES- SEC-02
BZO-S 402: APICULTURE
(Credits 2)
THEORY**

Lectures: 30

M.M.: 70

UNIT-I

Apiculture: History – Biology and classification of honey bee species of honey bees Social organization of honey bee colony. (04 Lectures)

UNIT-II

Bee hive: Flora for apiculture – Selection of bees for apiculture, Method of bee Keeping – Indigenous method of Extraction of honey. (06 Lectures)

UNIT-III

Modern method of apiculture: Appliances for modern method. Diseases of Honey bee and control measures. (08 Lectures)

UNIT-IV

Products of bee keeping: Honey – Bee wax and Bee Yeman – Honey: Production, Chemical composition – Economic importance of Honey bee wax. (06 Lectures)

UNIT-V

Bee enemies: Bee keeping industry – Recent efforts – Modern method in employing honey bees for cross pollination in horticultural gardens. (06 Lectures)

Note: The question paper shall consist of two sections (A & B). Section A shall contain ten short answer type questions of six marks each and student has to attempt any five questions in about 150 words each. Section B shall consist eight long answer type questions of ten marks each and student shall be required to attempt any four questions in detail. Questions shall be uniformly distributed from the entire syllabus. The previous year paper can be used as a guideline and the following syllabus should be strictly followed while setting the question paper.

A. GENETICS

1. Study of Mendelian Inheritance and gene interactions (Non-Mendelian Inheritance) using suitable examples. Verify the results using Chi-square test.
2. Study of Linkage, recombination, gene mapping using the data.
3. Study of Human Karyotypes (normal and abnormal).

B. EVOLUTIONARY BIOLOGY

1. Study of fossil evidences from plaster cast models and pictures
2. Study of homology and analogy from suitable specimens/ pictures
3. Charts:
 - a. Phylogeny of horse with diagrams/ cut outs of limbs and teeth of horse ancestors
 - b. Darwin's Finches with diagrams/ cut outs of beaks of different species
4. Visit to Natural History Museum, submission of report