UNIT 1: Study of the following families:

e. Cucurbitaceae  f. Compositae


UNIT 2: Economic botany: Study of the family name, botanical name, the parts used and the economic importance of the following:

- Cereals and millets: wheat, rice, jowar, ragi.
- Pulses: Pigeon Pea, Black gram and Bengal gram.
- Oils and Fats: Ground nut, Coconut and Safflower.
- Fibers: Cotton, Jute and coir.
- Beverages: Coffee, Tea and Cocoa.
- Spices: Cardamom, Clove and Cinnamonum.
- Sugar and Starch: Sugarcane, Beetroot, Potato and Tapioca.
- Timber: Teak and Rosewood.
- Paper and Pulp: Bamboo and Eucalyptus.
- Narcotics: Ganja and Opium.

UNIT 3: Environmental Biology:

Introduction and scope of Environmental Biology.

Environmental Factors: a. Climatic (water, temperature, light, air etc)
   b. Edaphic (organic matter and soil profile, erosion and conservation)
   c. Biotic (Interactions, effect of plants on environment, competition, mutualism, proto co-operation, commensalism, amensalism, saprophytism, parasitism, predation (plants vs. animals))

Ecosystem: Concept and components with reference to marine, grassland and tropical deciduous forest ecosystems.

UNIT 4: Ecosystem management: Pollution – Air, water, soil.

Global warming, greenhouse effect, ozone depletion.
Ecological succession: Hydrosere, Xerosere
Ecological adaptations: Hydrophytes, Xerophytes, Halophytes, Epiphytes, Parasites, Saprophytes and Symbionts.
Chipko and Appico movements.

UNIT 5: Phytogeography

Phytogeographical regions of India. Vegetational types of Karnataka
2. Study of families: Acanthaceae, Rubiaceae.
4. Study of families: Gramineae, musaceae, Cannaceae.
5. Study of economically important plants covered in theory and to identify with botanical names, family, parts used and uses.
7. Study of soil profile, texture and soil Ph. (garden soil)
8. Field trip to study watershed management (or) rain water harvesting (or) organic farming. Preparation of report.
10. Submission of economically important plant parts.

BOT 551 SEMESTER V PRACTICAL 5

QUESTION PAPER

TIME: 3 hrs
Max. marks: 50

1. Assign the specimens A, B and C to their respective families giving diagnostic features. 3x5 = 15
2. Describe D in technical terms. Draw the floral diagram with floral formula. 8
3. Estimate the amount of chloride in the given water sample E. 10
4. Identify the specimens, F, G & I and highlight their economic importance/adaptations. 3x4 = 12
5. Comment/Test the pH of J 5

6. Submission: Records and 10 economically important plant parts.

SCHEME OF EVALUATION

1. A, B and C – two dicot and one monocot;
   (identification and classification-2, features-3)
2. D - description-4; diagram-3; formula-1
3. Chloride estimation. experiment 5 calculation 5
4. F - Economic importance, Adaptation (identification-1, characters-3)
   (E, F identification-1, Bot. name and family-2, importance-1)
5. J - soil profile/texture/ pH 5.
Text books


Trivedi A text book of Environmental Sciences, LB Publishes.


References:
- Trivedi and Sharma Taxonomy of Angiosperms L.B.Publications.
- Pandey, Botany Vol II Chand Publication.
- Publications, New Delhi.