

## **STRUCTURE OF COURSE (SYLLBUS)**

**Course Code: CCVC21(T)**

**Nomenclature: Vermicomposting (Theory)**

**Maximum Marks: 60**

**Time: 3 hours**

**Note:** Examiner will be required to set nine questions in all. First question will be compulsory, consisting of objective type/short answer type questions covering the entire syllabus. In addition to that eight more questions will be set, two questions from each unit. A candidate will be required to answer five questions in all, selecting one question from each unit in addition to compulsory question number one. All questions will carry equal marks. (12×5=60)

### **UNIT- I**

- Vermicomposting: Introduction and scope
- Vermicompost production: Establishment of vermicomposting unit
- Different methods of vermicomposting: Pit method, Bed method and Heap method
- Harvesting of vermicompost
- Sorting and packing of vermicompost

### **UNIT- II**

- Nutrient content of Vermicompost
- Physico- chemical analysis of Vermicompost
- Precaution while vermicomposting
- Use of vermicompost in agriculture

### **UNIT- III**

- Vermiculture, definition, economic importance
- Types of earthworms and classification epigeic, endogeic, anecic
- Useful species of earthworms, local species and exotic species of earthworms
- Distribution, ecology and food habits of earthworms

### **UNIT- IV**

- Biology of *Eisenia fetida*, taxonomy, anatomy, physiology and reproduction
- Role of earthworms in maintenance of soil structure
- Role of vermiculture as four R's of recycling Reduce, Reuse, Recycle and Restore (4R)
- Pest and disease of earthworms

## Practical Course

**Course Code: CCVC21(P)**

**Nomenclature: Vermicomposting (Practical)**

**Maximum Marks:**

**40**

**Time: 3 hours**

### **List of Practical:**

- To study of external morphology of *Eisenia fetida*
- To study of life stages of *Eisenia fetida*
- To study Vermicomposting/ Vermiculture equipments and devices
- A visit to Vermicomposting Unit to demonstrate hand on training on Vermicompost/ Vermiculture
- To study effect of temperature and humidity on Vermicomposting process.

### **Reading List:**

#### **Essential Reading:**

- Vermitechnology, M. Seetha Lekshmy, R. Santhi, Saras Publication.
- Textbook of Vermicompost: Vermiwash and Biopesticides, Keshav et al Singh, Astral International.
- Biology of Earthworms, C.A. Edwards and J.E. Bater. Chapman & Hall.

#### **Suggested Reading:**

- Vermicompost Production, Dr. S Rehan Ahmad, IR Publications.
- Vermicomposting For Sustainable Agriculture, PK Gupta, Agrobios Publication.
- Vermiculture and Vermicompost (Earthworm) with Manufacturing Process, Machinery Equipment Detail and Plant Layout, Dr. Himadri Panda, Asia Pacific Business Press Inc.