

Value Added Course
Course code: ZooV-101
COURSE TITLE: Vermicomposting

Duration of course: 30 hours
Periods/week: 4

Credit Hours/week: 1 hrs.
Total Credit Hours: 15 hrs.
Theory: 25
Practical: 25
Total Marks: 50

Examination Time: 1hour

Instructions for the Paper Setters:

- 1) There will be a total of 30 objective type questions of which 25 are to be attempted (1 mark each).

COURSE OBJECTIVES

| | |
|---|--|
| 1 | Understand the structures and purposes of basic components of vermicomposting. |
| 2 | Understand species of earthworm used in vermiculture. |
| 3 | Understand the significance and use of vermicompost. |
| 4 | Apply their knowledge for sustainable development and conservation of environment. |

Note: Attempt 25 question in all. Each question carries one mark.

Theory

- **The earthworm**
 - Brief Introduction of Earthworm
 - Earthworm species used in vermiculture/vermicomposting
 - Features of selection
 - Enemies of earthworm
 - Earthworm and soil fertility
- **Vermicomposting**
 - Composting vs. Vermicomposting
 - Methods, procedures and precautions of vermicomposting
 - Setting up of units: small scale and large scale
 - Factors affecting vermicomposting
 - Advantage of vermicompost
- **Other benefits**
 - Application in pharmaceutical Industry
 - Application in Agriculture

Handwritten signature/initials

Practical

1. Study of morphology and identification of Earthworm sp. *Eisenia fetida* and *Metaphire posthuma*
2. Vermicomposting procedure (Setting up of Home unit).
3. Types of organic waste used in vermicomposting.
4. Physico-chemical analysis of vermicompost (pH, EC, N, P, K, O and C)

Suggested Readings:-

1. Dhami, P.S. & Dhami, J. K(2001), Invertebrates, R. Chand & Co., New Delhi.
2. Barth, R. H. and Broshears, R. E (1982), The Invertebrate world. Holt Saunder, Japan.
3. Brusca, R. C. and Brusca, G. J. (2003), Invertebrates (2nd ed). Sinauer Associates, Inc. Publishers, Sunderland, Massachusetts.

COURSE OUTCOMES: After the completion of course, the student will be able to have

| | |
|-------|---|
| CO-1. | Understanding of structures and purposes of basic components of vermicomposting. |
| CO-2. | Knowledge of species of earthworm used in vermiculture. |
| CO-3. | Utilize vermicompost. |
| CO-4. | The ability to apply their knowledge for sustainable development and conservation of environment. |

Handwritten signature/initials