

## **SEMESTER-II (Pool-A)**

### **Vermicomposting**

**(CHOI-A47)**

**Number of Credit: 02**

**Maximum Marks: 50**

#### **Unit I: Waste Management Issues**

1. Challenges faced by urban areas in managing increasing amounts of organic waste.
2. Urban waste management systems.
3. Traditional waste management methods such as landfilling and incineration

#### **Unit II: Biology and Ecology of Earthworms**

1. Earthworm – Taxonomic position and external features.
2. Life cycle of earthworm and ideal environment for earthworms.
3. Burrowers, casters, nocturnal, poikilothermal, ecological grouping – Epigeic, Endogeic and Anecic species.

#### **Unit III: Composting: The process**

1. Overview of composting and its importance
2. Selection of earthworm species, feeding and caring for earthworms
3. Preparation and maintenance of vermicompost bins/beds
4. Benefits of vermicomposting over traditional composting methods

#### **Unit IV: Compost: The product**

1. Techniques of harvesting Vermicompost
2. Processing and packaging of Vermicompost
3. Nutrient content and benefits of Vermicompost
4. Common pests and diseases of Vermicompost

#### **Unit V: Future Perspectives**

1. Potentials and constraints for vermicomposting in India.
2. Marketing techniques and quality control
3. Creating demand by awareness, advertisements, direct marketing.
4. Visit to relevant Labs/Field visits.

#### **Text Books:**

1. Sultan Ahmed Ismail, 2005. The Earthworm Book, Second Revised Edition. Other India Press, Goa, India.
2. Bhatnagar & Patla, 2007. Earthworm vermiculture and vermicomposting, Kalyani Publishers, New Delhi.
3. Jordan & Verma, 2009. Invertebrate Zoology, Chand & Company Ltd.
4. Mary Violet Christy, 2008. Vermitechnology, MJ Publishers, Chennai.
5. Aravind Kumar, 2005. Verms & Vermitechnology, A.P.H. Publishing Corporation, New Delhi

