B Sc - Extra Credit & Value added Courses

2024-25 onwards

Semester-III/ Extra credit III	**VERMICULTURE**	Course Code: ECSZ
Instruction Hours:	Credits: 2	Exam Hours:
Theory – 40 Marks	Practical – 60 Marks	Total Marks: 100

THEORY **TOTAL MARKS: 40**

Course Objectives:	1. To study the taxonomy and diversity of Earthworms 2. To know the ecology, biology and beneficial role of Earthworms. 3. To gain basic knowledge in Vermicomposting and Vermiculture. 4. To create awareness about vermicompost and its important as fertilizer. 5. Ability to provide consultancy services.
Unit I	Earth worms Outline Classification Features of Ecological. Classification, Epigeic, Anecie and Endogeic forms - Humus Feeders - Humus Formers. Role of earthworms in sustainable agriculture – organic farming – Earthworm activities- soil fertility and texture- soil aeration- water percolation- decomposition and moisture.
Unit II	General body structures of earthworms. Morphology – Coelom – Body wall- Locomotion- - Respiration- - Cocoon formation. Earthworm activities- soil fertility and texture- soil aeration- water percolation- decomposition and moisture. Organic wastes: Municipal, Agricultural and other wastes - Animal dung- requirements/ materials required for vermiculture and vermiwash. Vermicomposting - Methods Pit, Heap and Tank. Advantages – Products Vermicompost.

PRACTICAL **TOTAL MARKS: 60**

1. Culturing of Earthworm
2. Methods of vermicomposting
3. Heap Methods of vermicomposting
4. Pit Methods of vermicomposting
5. Shed preparation of vermicomposting
6. Use of vermicompost in crop production
7. Preparation of vermicompost pellets
8. Methods of preparation of vermiwash
9. Earthworms as animal feed
10. Vermiculture- waste treatment in plants

Text Book:

1. ISMAIL . S.A 1970. Vermiculture, The Biology Earth worms, Orient longman, London.
2. M.SEETHALAKSHMY, DR.R.SHANTHI.2012. Vermitechnology, Saras publication

Reference Books

1. EDWARDS C.A and P.J BOHELN 1996, Ecology and Earthworms3rd EditionChapman and Hall.
2. LEE K.E 1985 Earth worms Therecology and relationshipwith soil and land use Academic press, Sydney.
3. V. BANERJII 2003, Environmental Biotechnology.
4. S.C TALASHILKAR & A.A.K DOSANI Earthworms in Agriculture,Agrobios-India.
5. M.MARY VIOLET CHRISTY. 2008. Vermitechnology. MJP Publication.
6. GOWRAV SINGH, Organic farming & Vermiculture, ALP Books.2009.

SARANI. Vermicomposting &Vermiwash, Agrotech