

<b>Semester-V / Value added Course</b>		<b>Organic Farming</b>	<b>Course Code : VAQ:1</b>
<b>Instruction Hours : 4</b>		<b>Credits: 2</b>	<b>Exam Hours: 3</b>
<b>Theory – 40 Marks</b>		<b>Practical - 60 Marks</b>	<b>Total Marks: 100</b>
<b>UNIT</b>	<b>CONTENT</b>		<b>HOURS</b>
<b>I</b>	Soil –Physical & Chemical properties, Soil Pollution-Oil, chemicals-fertilizers, non-degradable solids, biomagnifications, consequences of land pollution – damage to soil and crops		<b>12</b>
<b>II</b>	Organic farming- definition, basic concept of organic farming, integrated plant nutrient supply management, integrated pest and disease management, integrated soil and water management. Sustainable agriculture practices- crop rotation, mixed cropping.		<b>12</b>
<b>III</b>	Management of organic wastes and green manures: Farm manures, composts, Mulches and pest control, importance of organic manure and green manure, crops of green manure, oil cake, Animal based organic manure-cow dung, vermicompost - methods, production and utilization.		<b>12</b>
<b>IV</b>	Biofertilizers- Classification, methods of application - nitrogen fixers- Rhizobium, Cyanobacteria, Azolla and mycorrhiza. Biopesticides and other practices to control diseases.		<b>12</b>
<b>V</b>	Recycling of biodegradable municipal, agricultural and industrial wastes- biocompost making methods.		<b>12</b>

#### **PRACTICAL**

1. Preparation of papaya candy, amla candy
2. Study of quality parameters of organic products
3. Soil analysis: pH determination
4. Identification of different types of fertilizers including biofertilizers.
5. Preparation of neem kernel powder.
6. Practicing and experiencing in farmer's fields.

#### **Text Books:**

1. APEDA (2001), *Guidelines for production for production of Organic Rice in India*, Agricultural and Processed Food Products Export Development Authority, New Delhi.
2. FAO (2015). *Training Manual for Organic Agriculture guide on Introduction to Organic Agriculture (FAO-TECA)*, International Federation of Organic Agriculture Movements (IFOAM – Organics International).
3. Vayas,S.C., Vaysa,S., & Modi.H.A (1998). Bio fertilizers and organic farming.Akta Prakashan.

#### **Reference Books:**

1. Shiva, V., Pande, P. and J. Singh (2004). *Principles of Organic Farming: Renewing the Earth's Harvest*. Navdanya, New Delhi.
2. Yadav Shweta and Singh V. K. 2014. Vermitechnology: Rebuilding of Sustainable Livelihoods. Nova Science Publisher, Inc: 400 Oser, Ave, Suite 1600: Hauppauge, New York, USA.
3. Rao, N.S.S (2000). Soil microbiology. Oxford & IBH publishers.