

**Dr. PANJABRAO DESHMUKH KRISHI VIDYAPEETH, AKOLA****SEMESTER END THEORY EXAMINATION**

B.Sc. (Hons.) Agriculture

Semester	:	IV (New)	Term	:	II	Academic Year	:	2020-21
Course No.	:	AGRO-248	Title	:	Principles of Organic Farming			
Credits	:	(1+1)						
Day & Date	:	13.11.2021	Time	:	1.00 Hr	Total Marks	:	40

**MODEL ANSWERS****SECTION-A****(Write the answers in 4-5 sentences only. Each question carries 4 marks)**

<b>Q. 1</b>	<p><b>Explain in brief the inspection and certification process in organic farming.</b></p> <p>Organic farming is a 'Process of Certification' and not 'Product Certification.</p> <ol style="list-style-type: none"><li>1) Interviews with persons involved in production after selecting appropriate certifying agency.</li><li>2) Physical inspection of farm, premises, processing equipment's, storage area, records etc.</li><li>3) Testing for residue analysis if inspector feels necessary.</li><li>4) After necessary inspection, the agency provides inspection and testing report. It decides whether to grant certification or not decided by the agency. Certification agency asks for final payment. Certification is granted after final payment. Grower/producer releases the stock for sale with Certification Mark (India Organic Logo)</li><li>5) If certification is not granted, the reasons are quoted for rejection. If agency feels that, some part of the farm is eligible for certification that is accepted with certain recommendations.</li></ol> <p>Thus, inspection and certification are 'side-by-side procedures</p>
<b>Q. 2</b>	<p><b>Write in short the principles of organic farming.</b></p> <ol style="list-style-type: none"><li>1. <b>Principle of Health:</b> It produces high quality, nutritious food that contributes to preventive health care and well-being.</li><li>2. <b>Principle of Ecology:</b> Attain ecological balance through the design of farming systems, establishment of habitats and maintenance of genetic and agricultural diversity.</li><li>3. <b>Principle of fairness:</b> Build on relationships that ensure fairness with regard to the common environment and life opportunities.</li><li>4. <b>Principle of Care:</b> It helps to protect the health and well-being of current and future generations and the environment.</li><li>5. <b>Biodiversity:</b> Maintain through intercropping, companion cropping, establishment of beneficial habitats and crop rotation etc.</li><li>6. <b>Sustainability:</b> Enterprise diversification helps in achieving sustainability in production.</li><li>7. <b>Natural pest management:</b> Natural predators, parasites and disease agents that quickly knock the pest numbers back down to a moderate level.</li></ol>
<b>Q. 3</b>	<p><b>Describe in short the labeling of organic product.</b></p> <p>Labeling shall convey clear and accurate information on the organic status of the product. When the full standards requirements are fulfilled, products shall be sold "Organic". On proper certification by certification agency "India Organic" logo can also be used on the product. The name and address of the person or company is on the label. All components of additives and processing aids shall be declared. Ingredients or products derived from wild production shall be declared as such. In Mixed products, it is labelled as</p>

	certified organic (minimum of 95% ingredients are of certified organic origin) and organic (70-95 %) The word "organic" may be used on the principal display in statements like "made with organic ingredients. The product may be called as "non organic" (less than 70% organic ingredients).
<b>Q. 4</b>	<p><b>Write in short the export potential of organic products in India.</b></p> <p>India is best known as an exporter of organic tea and also has great export potential for many other products. Products available for the export market are rice, wheat, spices, coffee, pulses, fruits and vegetables, cashew nuts, cotton, oil seeds and medicinal herbs. India produced around 3496800 MT (2020-21) certified organic products viz. Oil Seeds, Sugar cane, Cereals &amp; Millets, Cotton, Pulses, Medicinal Plants, Tea, Fruits, Spices, Dry Fruits, Vegetables, Coffee etc. Organic products are exported to USA, European Union, Canada, Switzerland, Australia, Israel, South Korea, Vietnam, New Zealand, Japan etc. In terms of export value realization soya meal (57%), Oilseeds (9%) lead among the products followed by Cereals and millets (7%), Plantation crop products such as Tea and Coffee (6%), Dry fruits (3%), Spices and condiments (5.0%), medicinal plants (5%) and others.</p>
<b>Q. 5</b>	<p><b>Write the products that are restricted to nutrient use in organic farming?</b></p> <p>Matter produced outside the organic farm unit viz. blood, meat, bone and feather meal, compost, FYM, slurry, urine, Fish and fish products without preservatives, wood bark, sawdust, wood shavings, wood ash and wood charcoal etc. By Products from the industries viz. biodegradable material of microbial, plant or animal origin without any synthetic additives, palm oil mill effluent, cocoa peat and empty cocoa pods, extracts from mushroom, Chlorella, Fermented product from <i>Aspergillus</i> and natural acids (vinegar). Minerals such as calcareous and magnesium rock, mineral K with low chlorine content (e.g. sulphate of potash, kainite), Trace elements (B, Fe, Mn, Mo, Zn), Wood ash from untreated wood, K<sub>2</sub>SO<sub>4</sub>, Aluminum calcium phosphate and Sulphur etc. are restricted.</p>
<b>SECTION-B</b>	
	<b>(Write the answers in one sentence only. Each question carries 2 marks)</b>
<b>Q. 6</b>	<p><b>Do as directed</b></p> <p>a) FAO and IFOAM</p> <p>b) <i>Eisenia foetida</i>, <i>Eudrillus eugeniae</i> and <i>Perionyx excavatus</i> (Any Two)</p> <p>c) It is traditional variety or improved/selected variety, genetic diversity, pest and diseases resistant and non-GMO genotypes.</p> <p>d) Parasitoids viz., <i>Trichogramma sp.</i>, predators chrysopa, Pathogenic microorganisms viz., NPV, Bt, Metarhizium, Beauveria, verticillium, protozoa etc.</p> <p>e) <i>Crociosema lantana</i>, Lantana bug, <i>Bactra verutana</i> (Shoot boring moth) and <i>Zygogramma bicolorata</i> (Mexican beetle) etc. (Any Two)</p> <p>f) Ministry of Commerce and Industry, Ministry of Agriculture, APEDA, Coffee Board, Spices Board and Tea Board and other government and private organizations associated with the organic movement. (Any Two)</p> <p>g) Mulch, organic and biological fertilizers, crop rotation and multiple cropping etc. (Any Two)</p>

SECTION-C	
(Choose the correct option. Each question carry 1 mark)	
Q. 7	1) c) 2001
	2) d) Vermiwash
	3) b) Eco-friendly
	4) c) Cotton
	5) a) Bio-herbicides
	6) d) Prohibited
	7) b) <i>Parthenium hysterophorus</i>
	8) d) International standards
	9) d) Ghaziabad
	10) c) Organic tea
	11) a) Processing
	12) a) 1972

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