

MAJOR ELECTIVE COURSE – I ENTREPRENEURSHIP IN ZOOLOGY/ ECONOMIC ZOOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Which one of the following is an example of indigenous species of earthworm? (i) <i>Eudrilus eugeniae</i> (ii) <i>Eisenia fetida</i> (iii) <i>Lampito mauritii</i> (iv) <i>Lumbricus rubellus</i>	K1	CO1
	2	What is the ecological significance of "Anecic" earthworm species compared to the "Epigeic" species used in culture? (i) Anecic species stay only on the surface and do not create tunnels. (ii) Anecic species create permanent vertical burrows that incorporate surface organic matter into deeper soil layers. (iii) Epigeic species are much better at improving soil drainage in deep agricultural fields. (iv) There is no ecological difference; both species eat soil.	K2	CO1
2	3	What is the first layer typically placed at the bottom of a new vermicompost bed? (i) Broken bricks/ sand or dried husk (ii) Fresh green leaves (iii) Plastic sheets (iv) Concentrated urea	K1	CO2
	4	How does the application of vermicast improve the physical condition of the soil? (i) By making the soil as hard as rock to prevent erosion. (ii) By increasing the salt content of the soil. (iii) By decreasing the number of microbes in the soil. (iv) By improving soil porosity, aeration, and water-holding capacity.	K2	CO2
3	5	What is the primary function of the Drone in a honey bee colony? (i) Collecting nectar (ii) Building honeycombs (iii) Mating with the Queen (iv) Protecting the hive	K1	CO3
	6	How does the wax moth damage a honeybee colony? (i) By tunneling through and destroying the wax combs and eating stored pollen. (ii) By penetrating the body of adult honey bees to eat their body tissues. (iii) By stealing the Queen's egg thereby causing a reduction in the number of worker bees. (iv) By extracting honey from one hive to transfer it to another hive.	K2	CO3
4	7	What is the application of a "Bee Veil"? (i) To catch swarming bees (ii) To protect the beekeeper's face from stings (iii) To cover the hive during rain (iv) To extract and filter the honey	K1	CO4
	8	What is the main advantage of using a "Langstroth Hive" over traditional fixed-comb hives? (i) It is made of cheaper materials so that profit will increase. (ii) It requires no maintenance during the dearth period. (iii) It attracts wild bees automatically and more honey can be harvested. (iv) It uses movable frames that can be inspected without destroying the comb.	K2	CO4
5	9	Which enzyme in honey helps in converting sucrose into glucose and fructose? (i) Amylase (ii) Lipase (iii) Invertase (iv) Pepsin	K1	CO5

Cont...

5	10	(i) To treat high blood pressure and coronary artery disease. (ii) To treat inflammatory conditions like rheumatoid arthritis. (iii) To treat chronic respiratory disorders like asthma. (iv) To treat hair fall and improve hair growth.	K2	CO5
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SECTION - B (35 Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** Marks

(5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Analyze the optimum environmental conditions required for the production of vermicompost.	K4	CO1
		(OR)		
	11.b.	Distinguish between monoculture and polyculture in vermiculture.		
2	12.a.	Compare the advantages and limitations of various methods of vermicomposting.	K4	CO2
		(OR)		
	12.b.	Examine the routine maintenance requirements of vermibed.		
3	13.a.	Explain the lifecycle of honeybee.	K2	CO3
		(OR)		
	13.b.	Summarize the specific functions of queen, drone and workers in a honeybee colony.		
4	14.a.	Appraise the management practices of beehives at different seasons.	K5	CO4
		(OR)		
	14.b.	Evaluate the necessity of various tools during the collection of honey from a hive.		
5	15.a.	Compare the methods of extraction of honey for a sustainable cottage industry.	K5	CO5
		(OR)		
	15.b.	Assess the nutritive and medicinal values of honey against modern drugs.		

SECTION - C (30 Marks)

Answer **ANY THREE** questions
ALL questions carry **EQUAL** Marks

(3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Outline the salient features of commonly used earthworm species for vermicomposting.	K2	CO1
2	17	Analyze the role of vermicompost in organic farming.	K4	CO2
3	18	Appraise the characteristics of various types of honeybees suitable for successful apiculture.	K5	CO3
4	19	Distinguish the design and applications of beehives used in apiary.	K4	CO4
5	20	Formulate a new health supplement that combines pollen, royal jelly and honey. Create a detailed "Nutrition Fact" label based on their known chemical composition.	K3	CO5

Z-Z-Z

END