A **Reg. No. :** | | | | | | | | | | | | |

Question Paper Code: R3A04

B.E./B.Tech. DEGREE EXAMINATION, NOV 2024

Third Semester

Agricultural Engineering

R21UAG304– INTEGRATED FARMING SYSTEMS

(Regulations R2021)

Duration: Three hours Maximum: 100 Marks

Answer All Questions

PART A - (10 x 1 = 10 Marks)

1. Dry spellis most common in which type of farming system? CO1-U

   a) Dry farming b) Dry land Farming c) Rainfed Farming d) Irrigated Farming

2. Which one of the following pairs is not correctly matched? CO1-U

   a) Relay cropping: Sowing pulse in rice crop prior to harvest

   b) Mixed cropping: Brinjal

   c) Inter cropping: Groundnut+ Cowpea

   d) Sole cropping: Sugarcane

3. Which enterprises are most suitable in dry land ecosystem? CO1-U

   a) Sericulture b) Goat rearing c) Mushroom d) Apiary

4. ……is the goal of integrated farming system CO1-U

   a) Maximization of yield b) Rejuvenation of system

   c) Reducing use of chemical d) All the above

5. _____.is the method of inducing roots in a stem which is still attached to the plant CO1 – U

   a) Layering b) Budding c) Grafting d) Cutting

6. Protein content in azolla CO1 – U

   a) 25-30% b) 20-25% c) 30- 35% d) 15- 25%

7. Which breed cows are good milkers and the bullocks are with good draft work capacity — CO1 – U

(a) Sahiwal (b) Nagore (c) Tharparkar (d) Red sindhi

8. Seed material of mushroom as called — CO1 – U

a) Spore b) Spawn c) Mycelium d) All the above

9. ……is the name of female pig — CO1 – U

a) Sow b) Boar c) Bull d) Both (a) and (b)

10. In spawn production the boiled grains are mixed with $CaCo_3$ at ……..on dry weight basis. — CO1 – U

a) 2g/kg b) 20g/kg c) 2g/g d) 200g/ kg

PART – B (5 x 2= 10Marks)

11. How are farming systems categorized based on rainfall, and what are three key differences among these categories? — CO1 – U

12. What are the components of an Integrated Farming System (IFS) in a garden land ecosystem? Provide brief descriptions of any two of these components? — CO1-U

13. Provide a list of bee species along with their scientific names and family classifications. — CO1 – U

14. How to rear poultry in cage system? — CO1 – U

15. Give neat sketch for resource flow model of integrated farming system in garden land. — CO1 – U

PART – C (5 x 16= 80Marks)

16. (a) Give details about the following farming system — CO1 – U (4)

i. Organic farming (4)
ii. Irrigated farming (4)
iii. Precision farming (4)
iv. Integrated farming system

Or

(b) Explain the following farming system — CO1 – U (4)

i. Dairy farming (4)
ii. Vertical farming (4)
iii. Terrace cultivation (4)
iv. Aeroponics farming

17.	(a)	What steps would you take to implement an integrated farming system in a dryland area to address water scarcity and increase income for local farmers?	CO3 – App	(16)
		Or		
	(b)	How could integrating the farming system associated with wet land ecosystem to enhance the overall productivity and sustainability of the farm?	CO3 – App	(16)
18.	(a)	How to start small scale nursery with the use of different propagation method.	CO2 – App	(16)
		Or		
	(b)	Identification of honey bee species and their habit and charecteristics.	CO2 – App	(16)
19.	(a)	With an increase in your goat herd size, you need to upgrade your housing facilities to accommodate the larger number of animals. How would you design and implement the necessary improvements to ensure that the new housing is both functional and conducive to goat welfare?	CO2 – App	(16)
		Or		
	(b)	If you are going to start poultry unit what are the common management practices you should know and how implement the practices?	CO2 – App	(16)
20.	(a)	How can farm wastes be efficiently recycled and utilized across a system involving crops, dairy farming, biogas production, and mushroom cultivation to enhance overall sustainability and productivity?	CO2 - App	(16)
		Or		
	(b)	How would you approach the preparation of mushroom spawn using different methods, and what factors would you consider to ensure successful spawn development and quality?	CO2 - App	(16)