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

Question Paper Code: 52A04

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2019

Second Semester

Agriculture Engineering

15UAG204-PRINCIPLES OF AGRICULTURAL ENGINEERING

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Storage fodder in grain storage structures are called as CO1- R

   (a) Sewage (b) Silage (c) Spoilage (d) Bukhari

2. Thermal decomposition of organic matter in the absence of air is CO1- R

   (a) Gasification (b) Densification

   (c) Biogas production (d) Biomass production

3. _____ is a primary tillage equipment. CO2- R

   (a) Plough (b) Thresher (c) Harvester (d) Reaper

4. Tillage system in which only the isolated bands are tilled is called as CO2- R

   (a) Zero tillage (b) Mulch tillage (c) Minimum tillage (d) Strip tillage

5. Pasteurization of milk is done at _____ °C CO3- R

   (a) 50 (b) 72 (c) 90 (d) 110

6. Concentrating collectors can absorb CO3- R

   (a) Only direct radiation (b) Only diffused radiation (c) Direct and diffused radiation (d) Global radiation

7. Stanchion barn is also known as _____ barn CO4- R

   (a) Loose house (b) General purpose (c) Open air (d) Lofing

8. The main difference between planter and seed drill is CO4- R

   (a) Row spacing (b) Sowing (c) Covering the seed (d) Speed

9. The water content retained in the soil after the gravitational water has drained off from the soil is known as CO5- R

   (a) Capillary water (b) Salt water (c) Hygroscopic water (d) Wilting point

10. In biomass conversion process, briquetting is a _____ process CO5- R

    (a) Chemical (b) Hydrothermal (c) Thermal (d) Compression

PART – B (5 x 2= 10 Marks)

11.	Define groundwater.	CO1- R	
12.	Define Tillage.	CO2- R	
13.	List the material handling equipments.	CO3- R	
14.	What is the composition of biogas?	CO4- U	
15.	Write the principle of green house.	CO5-R	

PART – C (5 x 16= 80 Marks)

16.	(a)	What are the methods of irrigation? Discuss the drip irrigation system of irrigation with a neat sketch of layout indicating all components.	CO1-U	(16)
		Or		
	(b)	What are the instruments used to measure rainfall. Explain it with a neat sketch	CO1-U	(16)
17.	(a)	Explain combine harvester, its components and functions in detail.	CO2-U	(16)
		Or		
	(b)	Discuss the importance of primary and secondary tillage in agriculture. Explain the equipments required for the same.	CO2-U	(16)
18.	(a)	Discuss the different material handling equipments and their applications in detail	CO3- U	(16)
		Or		
	(b)	Discuss the milk processing and explain the process involved in any one dairy product.	CO3-U	(16)
19.	(a)	Explain the process of gasification of biomass, chemistry and its application for IC engines	CO4-U	(16)
		Or		
	(b)	Discuss how different agricultural waste can be effectively utilized.	CO4-U	(16)
20.	(a)	Explain the green house structure, components, design requirements and applications in detail with neat diagram.	CO5- U	(16)
		Or		
	(b)	Discuss the design requirements and types of cattle shed	CO5- U	(16)