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

Question Paper Code: 52A04

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2018

Second Semester

Agricultural 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. Tillage being the basic operation in farming, it is performed for CO1- R

   (a) Preparing seed bed (b) Puddling soil for planting seedlings

   (c) Removing weeds and roots of previous crops (d) All of the above

2. Mechanization possibility is strongly influenced by CO1- R

   (a) Farm size (b) Cost of farm power

   (c) Availability of suitable machines (d) All of the above

3. Soil erosion is a CO2- R

   (a) Transportation (b) Cycle phenomena

   (c) Detachment and transportation (d) Detachment, transportation and transpiration

4. Trickle irrigation is also known as CO2- R

   (a) Sprinkler irrigation (b) Furrow irrigation

   (c) Drip irrigation (d) Flood irrigation

5. Biogas is a mixture of CO3- R

   (a) Oxygen, Carbon dioxide, Nitrogen (b) Methane, Nitrogen, Hydrogen

   (c) Methane, Nitrogen, Oxygen (d) None of these

6. Which of the following is a nonrenewable energy resource? CO3- R

(a) Solar (b) Hydroelectric (c) Methane (d) Coal

7. Which machine are most popular for spraying chemicals CO4- R

(a) Improving keeping quality (b) Improving sugar content of the milk

(c) Proper mixing of fat in the milk (d) Color changes of the milk

8. Pasteurization is done to achieve the following results CO4- R

(a) Evaporator (b) Steam turbine (c) Condenser (d) Boiler

9. LSU dryer is CO5- R

(a) Rotary type (b) Floating bed type (c) Continuous flow type (d) Fixed bed type

10. Cup anemometer is used to measure CO5- R

(a) Wind speed (b) Direction of wind

(c) Wind pressure (d) Relative humidity

PART – B (5 x 2= 10Marks)

11. What is the primary tillage? CO1- R

12. Advantage of drip irrigation system? CO2- R

13. Difference between renewable and non renewable resources? CO3- R

14. Define specific heat? CO4- R

15. List out four modern storage structures CO5- R

PART – C (5 x 16= 80Marks)

16. (a) Define irrigation? Discuss the different irrigation methods with a neat sketch. CO1- U (16)

Or

(b) What is soil erosion? Explain the various soil erosion conservation methods. CO1- U (16)

17. (a) What is farm mechanization and discuss about implements used for sowing and fertilizer application methods CO2- U (16)

Or

	(b)	Short notes on objective of tillage? Discuss the importance of primary and secondary tillage implements with neat sketch.	CO2- Ana	(16)
18.	(a)	What are unit operations involved in agricultural processing and explain the working principle of rubber roll sheller with neat sketch.	CO3-U	(16)
		Or		
	(b)	Explain the different types of material handling equipments with net sketch.	CO3- U	(16)
19.	(a)	(i) What is bio gas? Discuss its advantages and disadvantages.	CO4- U	(8)
		(ii) With a neat sketch, explain the working of KVIC Model biogas plant.	CO4- U	(8)
		Or		
	(b)	(i) Explain the working principle photo voltaic cell with neat sketch.	CO4- U	(8)
		(ii) Explain the working principles of down draft gasification system.	CO4- U	(8)
20.	(a)	Explain the different storage structures used for food grains with neat diagram.	CO5- U	(16)
		Or		
	(b)	Discuss the design requirements of poultry shed with suitable diagram.	CO5- U	(16)