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

Question Paper Code: 52708

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 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. The downward movement of water through the soil profile is known as CO1- R

   (a) Percolation (b) Seepage (c) Drainage (d) Interflow

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. _____ is a micro irrigation method CO2- R

   (a) Bund (b) Ridges (c) Furrow (d) Drip

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

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

6. Screw conveyor can be used at _____ ^{0} for transport of materials CO3- R

   (a) 45 (b) 90 (c) 55 (d) 60

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. _____ is used for store animal fodder CO5- R

   (a) Silos (b) Bukhari (c) Kothar (d) Morai

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. List the soil erosion control measures. CO1- R

12. Define Tillage. CO2- R

13. List the material handling equipments. CO3- R

14. Write any four application of solar energy. CO4- U

15. Write the principle of green house. CO5-R

PART – C (5 x 16= 80 Marks)

16. (a) Classify the methods of irrigation and illustrate with suitable diagrams. CO1-U (16)

Or

(b) Explain the concept of watershed management. Discuss the importance of watershed development programme in India. CO1-U (16)

17. (a) Explain primary and secondary tillage and discuss the implements used for various tillage operations. CO2-U (16)

Or

(b) Describe the harvest methods and machineries used for harvesting paddy. CO2-U (16)

18. (a) Outline the major unit operations involved in agricultural processing. Specify the role of cold storage in minimizing the post harvest loss of agricultural products. 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 any one type of biogas plant with a neat sketch. CO4-U (16)

Or

(b) Discuss how different agricultural waste can be effectively utilized. CO4-U (16)

20. (a) Discuss the structure of stanchion barn with a neat sketch. CO5- U (16)

Or

(b) Describe the storage methods for feed and forage. CO5- U (16)