A   Reg. No. :

PART A - (10 x 1 = 10 Marks)

1. Pascal is the unit of _____.   CO1- R

   (a) Viscosity   (b) Bulk Density   (c) Temperature   (d) Pressure

2. _____is the formula used for converting temperature from   CO1- R
   Fahrenheit to
   (a) $^0C=5/9(F-35)$ (b) $^0C=5/9(f-32)$ (c) $^0C=9/5(f-35)$ (d) $^0C=9/5(f-32)$

3. Preservation of food aims at _____.   CO2-U

   (a) Microbial growth inhibition   (b) Killing of microbes

   (c) Removal of microbes   (d) All the above

4. Psychrometric chart represents _____ properties of air.   CO2- U

   (a) Thermodynamic   (b) Aerodynamic

   (c) Physico-chemical   (d) Hygroscopic

5. Separation of liquids from solids by the application of pressure is   CO3- U
   known as:

   (a) Extraction   (b) Expression   (c) Filtration   (d) Leaching

6. When you concentrate orange juice by boiling off the excess water, the   CO3- R
   unit operation involved in the process is known as _____.

   (a) Drying   (b) Crystallization   (c) Distillation   (d) Evaporation

7. A point where solid, liquid and vapour phase of substance exist is called CO4- R

(a) Melting point   (b) Triple point   (c) Boiling point   (d) Critical point

8. Bernoulli's equation represents conservation of _____. CO4- R

(a) Momentum   (b) Mass   (c) Force   (d) Energy

9. In the terminal velocity equation $V=[\{2W(\rho_{p-}\rho_f)\}/\rho_p\,\rho_f\,A_pC]^{1/2}$ CO5- R
   notation Ap represents _____.

(a) Surface area of particle   (b) Projected area of a particle

(c) Total area of a particle   (d) Circumferential area of a particle

10. Which of the following is used for agitation in a fermenter? CO5- R

(a) Impeller   (b) Baffles   (c) Sparger   (d) None of these

PART – B (5 x 2= 10Marks)

11. What is the unit of energy and power? CO1- R

12. Brief about centrifuge and its importance in filtration. CO2- U

13. State the role of attrition in size reduction. CO3- R

14. List out a few processing equipments with their application. CO4- U

15. Define crystallization. CO5- U

PART – C (5 x 16= 80Marks)

16. (a) Describe briefly about your understanding of the unit operations in agricultural process engineering. CO1- U (16)

Or

(b) Describe the types of evaporators with neat sketches. CO1- U (16)

17. (a) Give details about the working of various filtration equipments with neat sketches. CO2- U (16)

Or

(b) Explain the different types of evaporators and equipment and its application in food processing CO2- U (16)

18. (a) Explain in detail about various laws for crushing and size reduction. CO3-Ana (16)

Or

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(b)   Explain in detail about size reduction and equipments used for   CO3- Ana   (16)
size reduction with relevant diagrams.

19. (a)   Summarize about the types of equipments used for leaching with   CO4- U   (16)
tidy diagrams.

Or

(b)   With a neat sketch explain about explosive forming process.   CO4- U   (16)
State its advantages and limitations.

20. (a)   Discuss about distillation and write about the construction and   CO5- U   (16)
operation of batch distillation and the factors influencing the
operation.

Or

(b)   Describe the construction and operation of walker and vacuum   CO5- U   (16)
crystallizer with neat sketches.

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