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Roll No.

221142

4th Sem.
Branch : Food Technology
Sub. Principles of Food Engineering

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple choice Questions. All Questions are compulsory. (6x1=6)

- Q.1 The SI unit of temperature is _
a) Kelvin b) Celsius
c) Fahrenheit d) Rankine
- Q.2 Full form of HTST is
a) High Temperature Short Time
b) High Time short Temperature
c) High Temperature Short Temperature
d) High Time Short Time
- Q.3 Which of the following is used in the food industry for sterilization?
a) Pasteurizer b) Evaporator
c) Autoclave d) Drier
- Q.4 Unit of volume is
a) Volume cube b) Meter cube
c) Kg Cube d) Watt

- Q.5 Which of the following is NOT a fundamental quantity?
 a) Density b) Specific gravity
 \ c) Thermal conductivity d) Viscosity
- Q.6 Which of the following is a mode of heat transfer through a solid material?
 a) Conduction b) Convection
 c) Radiation d) None of these

SECTION-B

Note: Objective/Completion type questions. All questions are compulsory. $(6 \times 1 = 6)$

- Q.7 Direct heating has higher heat transfer rates than indirect heating. (True/False)
- Q.8 CGS unit system means _____.
 Q.9 Define Latent heat.
- Q.10 Viscosity is NOT the property of _____. (Liquids / Solids)
- Q.11 Plate evaporators can be used for viscous liquids. (True/False)
- Q.12 Reynolds's number 4000 or more signifies _____ flow.
 (Laminar/Turbulent)

SECTION-C

Note: Short answer type Questions. Attempt any eight questions out of ten Questions. $(8 \times 4 = 32)$

- Q.13 What are the various modes of heat transfer?

- Q.14 What do you understand about system of units? Classify it.
- Q.15 Differentiate between steam and water blanchers?
- Q.16 Describe the operation of fluidized bed boiler with neat and clean diagram.
- Q.17 What is Reynold's number? Give its range for different fluid flow.
- Q.18 Describe the working principle of multiple-effect evaporator.
- Q.19 What is manometer? Explain the working principle of U tube manometer.
- Q.20 What are the uses of heat exchanger?
- Q.21 Define all the characteristics of fluid flow.
- Q.22 Describe the working principle of centrifugal pump.

SECTION-D

Note: Long answer questions. Attempt any two questions out of three Questions. $(2 \times 8 = 16)$

- Q.23 Define Dryer and enlist their type. Explain any one in detail with neat and clean diagram.
- Q.24 Explain the concept of mass transfer during food processing in detail.
- Q.25 What are the various physical properties of food? Explain.