

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 Describe the working principle of a fluidized bed dryer with a neat and clean diagram.
- Q.24 Give definition of heat exchangers and give classification based on flow arrangement.
- Q.25 Describe the operation of a Babcock and Wilcox boiler with a neat and clean diagram.

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Roll No.

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4th Sem / Food Technology

Subject : Principle of Food Engineering

Time : 3 Hrs.

M.M. : 60

SECTION-A

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

- Q.1 What is the SI unit for volume ?
a) Cubic meter b) Cubic centimeter
c) Liter d) Milliliter
- Q.2 Which of the following is not a fundamental quantity?
a) Length b) Time
c) Mass d) Velocity
- Q.3 The SI unit for temperature is :
a) Kelvin b) Celsius
c) Fahrenheit d) Rankine
- Q.4 Which of the following is a rheological property?
a) Density
b) Specific gravity
c) Thermal conductivity
d) Viscosity

Q.5 Thermal conductivity measures the ability of a material to:

- a) Absorb heat
- b) Conduct heat
- c) Reflects heat
- d) Emit heat

Q.6 The specific gravity of water is :

- a) 1
- b) 0
- c) 1000
- d) 9.81

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Manometers are devices used to measure the pressure of fluids, such as liquids and gases. (True/False)

Q.8 Laminar flow occurs when the Reynolds number is low, typically below 2000. (True/False)

Q.9 Full form of PHE

Q.10 Diaphragm pumps are positive displacement pumps that use a flexible diaphragm to displace fluid.(True/False)

Q.11 A piston pump is a type of positive displacement pump.(True/False)

Q.12 Manometers are devices used to measure the _____ of fluids.(Pressure / Temperature)

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Define the terms conduction and convection heat transfer.

Q.14 Discuss the points to be considered while selecting equipment for the food industry.

Q.15 Explain the process of spray drying.

Q.16 Briefly explain the construction of a shell and tube heat exchanger.

Q.17 Describe the working principle of a pan/batch type evaporator with a neat and clean diagram.

Q.18 Discuss the principle of mass transfer in food processing ?

Q.19 Enlist different parts of an autoclave and their function in brief.

Q.20 Differentiate between steam and water blanchers.

Q.21 Give name a rheological property of food materials and its importance in food processing.

Q.22 Briefly explain the concept of extended surface heat exchangers.