Q.18 Write a short note on Binary distillation.

Q.19 Explain Isothermal process of thermodynamics.

Q.20 Explain Fourie's law of heat conduction.

Q.21 Explain Blake Jaw crusher with neat sketch.

Q.22 Explain the concept of Gibbs free energy

SECTION-D

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

Q.23 Define Entropy and second law of thermodynamics with suitable example.

Q.24 Describe the simple and steam distillation processes?

Q.25 Explain principle, working and use of Ball mill with neat sketch.

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3rd Sem.
Branch : Plastic Technology
Sub.: Basics of Chemical Engineering

Time : 3 Hrs. M.M. : 60

SECTION-A

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

Q.1 Fourier law is related to Mass Transfer Operation

a) True b) False

Q.2 Which of the following is a type of thermodynamic system?

a) Open system

b) Closed system

c) Thermally isolated system

d) All of the mentioned

Q.3 Which of the following involves vibrations?

a) Hammer mill b) Ball mill

c) Roll mill d) Grizzly screen

Q.4 An Islosed systems is one in which_____.

a) Mass does not cross boundaries of the system, through energy may do so

b) Neither mass nor energy crosses the boundaries of the system.

c) Both energy and mass cross the boundaries of the system

d) Mass crosses the boundary but not the energy

Q.5 Joule was the first to prove that heat is a type of energy, laying the groundwork for the fundamental law of thermodynamics.

a) False b) True

Q.6 Which of the following is a type of thermodynamic system?

a) Open system

b) Closed system

c) Thermally isolated system

d) All of the mentioned

SECTION-B

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

Q.7 Define forced convection.

Q.8 Define Fourier's law.

Q.9 Define open system in Thermodynamics.

Q.10 Define work in Thermodynamics.

Q.11 Define mesh number.

Q.12 Define conductivity.

SECTION-C

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

Q.13 Explain Fick's law of diffusion.

Q.14 Describe the first law of thermodynamics.

Q.15 Define the principle of ball mill and give its use.

Q.16 Draw the sketch of cycle separator explains it's working.

Q.17 Write the various difference between crushing and grinding operation.