

[Time: - 3 Hours]

[Marks: 70]

- N.B: 1. All questions are compulsory
2. Figures to the right indicate full marks

- Q.1.a Give the working of Bourdon Gauge (3)
 b Elaborate on mass transfer in Turbulent flow (3)
 c Discuss factors affecting caking of crystals (2)
 d Explain methods to improve rate of Evaporation (2)
 e Draw neat diagram of Simple Distillation Unit (2)
 f Write a note on Nickel and its alloys as material of construction (3)
- Q.2.a Explain briefly the principle and working of Rotary pumps (4)
 b Define crystallization and discuss the design and working of Krystal **OR** Circulating Magma Crystallizer (4)
 c Give an account of Steam Distillation (3)
- Q.3.a Classify flowmeters and explain Venturimeter **OR** Pitot tube (4)
 b. Outline the working of Contact Condensers (3)
 c Give an account of a Simple Refrigeration system (4)
- Q.4.a Explain in detail Reynold's Experiment (4)
 b Write a note on Tubular Heat Exchangers **OR** Modes of heat transfer (4)
 c Elaborate on stage of Supersaturation and Crysta growth in crystallization (3)
- Q.5.a Give salient features of Centrifugal Pumps (3)
 b Explain the principle of fractionation and write a note on Sieve Plate **OR** Bubble Cap Columns (4)
 c What are Hazards ? Give an account of Chemical Hazards (4)
- Q.6.a Explain in detail Belt Conveyors (3)
 b Describe the design and working of Climbing Film Evaporator (4)
 c Discuss the factors affecting rate of Corrosion **OR** Elaborate on any one type of Corrosion (4)
