No. of Printed Pages : 4
Roll No. .....

222234

3rd Sem / Plastic Technology

Subject : Basics of Chemical Engineering

Time : 3 Hrs. M.M. : 60

SECTION-A

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

Q.1 Venturimeter is used to measure_____ of fluid.

a) Density b) Velocity

c) Rate of flow d) None of these

Q.2 Reynolds number for turbulent flow is

a) <2000

b) >4000

c) Between 2000 to 4000

d) None of these

Q.3 Which is/are modes of heat transfer

a) Conduction b) Convection

c) Radiation d) All of these

Q.4 In closed system, what is shared?

a) Heat b) Mass

c) Both A & B d) None of these

Q.5 In isobaric process, which factor is constant?

a) Volume b) Entropy

c) Pressure d) None of these

Q.6 Example of automatic valve is

a) Ball valve b) Solenoid valve

c) Both A & B d) None of these

SECTION-B

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

Q.7 Define rate of discharge.

Q.8 Rota meter is used to measure_____

Q.9 Define Fourier's law of heat conduction.

Q.10 Expand LMTD.

Q.11 Define specific heat.

Q.12 Write any one size reduction law.

SECTION-C

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

Q.13 Explain butterfly valve with diagram.

Q.14 Explain cyclone separator with diagram.

Q.15 Write Bernoulli's equation and its application in fluid flow.

Q.16 What is Manometer? Explain simple manometer.

Q.17 Drive an expression for conduction across single wall.

Q.18 Explain the concept of Gibbs free energy.

Q.19 Explain log mean temperature Difference (LMTD).

Q.20 Explain orifice meter.

Q.21 Explain reciprocating pump.

Q.22 Explain any one crusher with diagram.

SECTION-D

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

Q.23 Explain centrifugal pump with neat sketch.

Q.24 Explain grinders with neat diagram.

Q.25 Explain heat transfer by natural and forced convection.