VITHALBHAI PATEL & RAJRATNA P.T. PATEL SCIENCE COLLEGE
VALLABH VIDHYA NAGAR

T.Y. B.Sc. SEM: V   INTERNAL TEST   DATE: 18th Oct. 2018
SUB: INDUSTRIAL CHEMISTRY   TIME: 10:00 am to 12:00 pm
SUB CODE: US05CICH06   TOTAL MARKS: 50

Q1 MCQ.   [08]

1. The fluid which does not offer resistance to flow is known as___
 (a) Ideal Fluid   (b) Bingham fluid   (c) Pseudo plastic   (d) All of these.
2. If the density of fluid affects appreciably by changes in temp. &pressure, the fluid is to be_____
 (a) Dalton fluid   (b) non compressible fluid   (c) Compressible   (d) All of these.
3. A simplex pump is the one having only -------------- cylinder.
(a) Four   (b) two   (c) three   (d) one
 4. -------------- Pump consist of a heavy walled cylinder of a small diameter that incorporates a closed fitting reciprocating plunger, which is merely a extension of a piston rod.
(a)Plunger   (b) Diaphragm   (c) piston   (d) duplex
5. The transfer of heat from one part of a body to another part of the same body or from one body to another which is in physical contact in solids is by ----------------.
(a) Conduction (b) Convection (c) radiation   (d) Black body
6.The mode of heat transfer in which the motion of fluid is the result of difference in density of the cooler and warmer fluid is known as----------------
(a)Natural convection (b) Force convection (c) Direct heat transfer (d) indirect heat transfer.
7. A heat exchange equipment employs to cool a process fluid by means of water is --------------
(a)Cooler   (b) Chiller   (c) Heat exchanger   (d) Boiler
8. A heat exchange equipment employs to remove latent heat is ----------------
(a)Condenser   (b) Boiler   (c) Steam jacket   (d) All of these.

Q2 Answer the following in short.(Attempt Five, each two marks)   [10]
1. Define: laminar flow, turbulent flow.
2. Draw & write equation for pressure difference in Inclined manometer.
3. Discuss about different Pipe fittings.
4. Explain: Capacity, Overall Efficiency.
5. Define : Thermal conductivity
6. Write the importance of insulators in industries.
7. Explain condenser & Cooler.
8. When kettle type reboiler is used?

Q3. Derive an equation for Bernoullis theorem.   [08]

OR

Q3. Write the note on U-Tube Manometer   [08]
Q4. Draw the diagram & explain working of Reciprocating pump   [08]

OR

Q4. Explain working of diaphragm pump with the help of diagram   [08]
Q5. Derive an equation for resistance in series.   [08]

OR

Q5. Derive an equation for heat flow through cylinder   [08]
Q6. Explain working of double pipe heat exchanger   [08]

OR

Q6. Write a note on shell & tube heat exchanger?   [08]