

Q.19 Explain the working of U tube manometer and write the expression for pressure difference calculation. (CO1)

Q.20 Differentiate between steady and unsteady flow. (CO1)

Q.21 Define cavitation. Write the expression for power requirement by centrifugal pump. (CO4)

Q.22 Differentiate between venturimeter and rotameter. (CO3)

SECTION-D

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

Q.23 Explain in detail construction, working and advantages of Reciprocating pump. Also draw neat and clean diagram. (CO4)

Q.24 Explain Bernoulli's theorem and derive the expression of Bernoulli's theorem. (CO2)

Q.25 Write short notes on any four of the following:-

- a) Pitot tube (CO3)
- b) Pump Priming (CO4)
- c) Effect of roughness in pipes (Co2)
- d) Continuity equation (CO2)
- e) Newtonian fluids (CO1)
- f) Streamline flow (CO1)

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2nd Sem / Chemical, Chem P & P

Subject : Fluid Flow

Time : 3 Hrs.

M.M. : 60

SECTION-A

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

Q.1 Manometer is used for the measurement of (CO1)

- a) Atmosphere pressure
- b) Pressure in pipes & channels
- c) Vacuum pressure
- d) None of these

Q.2 Bernoulli's equation is used to establish relation between (CO2)

- a) Various forms of energy
- b) various forces involve
- c) torque to change in angular manometer
- d) various forces with change in manometer

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Q.3 Which of the following is a shear thinning fluids. (CO1)

- a) Thixotropic b) Rheopactic
c) Dilatant d) Pseudo plastic

Q.4 Unit of dynamic viscosity is (CO1)

- a) N/m^2 b) $\frac{N-S}{m^2}$
c) N/m d) m^2/S

Q.5 Relation between atmospheric pressure and gauge pressure is (CO1)

- a) Atmospheric pressure + gauge pressure = Absolute Pressure
b) Absolute pressure + gauge pressure = Atmospheric Pressure
c) Atmospheric Pressure + Absolute Pressure = Gauge Pressure
d) Absolute Pressure = Gauge Pressure

Q.6 Phenomenon of cavitation related to (CO4)

- a) Surface tension b) Viscosity
c) Capillarity d) Vapors Pressure

SECTION-B

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

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Q.7 Define rotational flow. (CO1)

Q.8 Name any two types of non-Newtonian fluids. (CO1)

Q.9 Write any two types of positive displacement pumps. (CO4)

Q.10 Define Schedule Number. (CO5)

Q.11 Define Viscosity. (CO1)

Q.12 Name any two types of Values used in Industry. (Co5)

SECTION-C

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

Q.13 Differentiate between uniform and Non-Uniform flow. (CO1)

Q.14 Explain in brief pascal's law and Hydrostatic law. (CO1)

Q.15 Discuss the construction and working of pitot tube. (CO3)

Q.16 Differentiate between Blowers and compressors. (CO4)

Q.17 Describe Needle value in brief. (CO5)

Q.18 Discuss the colour coding of industrial piping used for transportation of various fluids. (CO5)

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