

Q.21 What do you mean schedule no?

Q.22 Mention uses of ball valve & needle valve.

### SECTION-D

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

Q.23 A venturimeter has the entrance diameter of 10 cm & throat diameter 4 cm. the Venturimeter head is 49 cm of water. Determine the discharge in litre/hour The venture constant may be taken as 0.97 ?

Q.24 List various type of manometer. Describe each with suitable diagram.

Q.25 Write short notes on any two of the following

- a) Friction losses in pipe
- b) Rotational & Irrotational flow
- c) BWG No.
- d) Priming & NPSH

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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 Which of the following is the basic principle of fluid mechanics?

- a) Momentum principle
- b) Energy equation
- c) Continuity equation
- d) All of the above

Q.2 When is the fluid is called laminar?

- a) High viscosity of fluid
- b) Reynold no is greater than 2000
- c) Reynold no is less than 2000
- d) None

Q.3 Which of the following is the type of fluid based on viscosity?

- a) Real fluid                      b) ideal fluid
- c) Newtonian fluid              d) All of the above

Q.4 A positive pressure less than atmospheric pressure is \_\_\_\_\_

- a) Absolute pressure              b) Gauge pressure
- c) Vacuum pressure              d) Static pressure

Q.5 What is pressure

- a)  $F \times A$                               b)  $F/A$
- c)  $A/F$                                 d) None

Q.6 What is the SI unit of velocity?

- a) ms                                      b) s/m
- c) m/s                                    d) None

### SECTION-B

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

Q.7 Which flow is called rotational flow?

Q.8 Write any one property of incompressible fluid.

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Q.9 Mention one effect of roughness in pipe on flow of fluid.

Q.10 Where rotameter is used?

Q.11 Name any one type of centrifugal pump.

Q.12 Why ball valve is used?

### SECTION-C

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

Q.13 What do you mean by streamline flow?

Q.14 List various types of fluid.

Q.15 Explain Hydrostatic law.

Q.16 Define continuity equation.

Q.17 Determine the viscosity of a liquid having kinematic viscosity  $6\text{cm}^2/\text{sec}$  & Specific gravity 1.9?

Q.18 Draw neat sketch of orifice meter.

Q.19 Differentiate between centrifugal pump & reciprocating pump.

Q.20 Describe efficiency of centrifugal pump.

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