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**END SEMESTER (REGULAR/RETEST)
EXAMINATION, JUNE – 2024**

Semester : 4th (Regular)

Branch : Chemical Engineering

Subject Code : Ch-406

CHEMICAL ENGINEERING DRAWING-I

Full Marks – 70

Time – Three hours

The figures in the margin indicate full marks
for the questions.

● **Instruction :**

All questions are compulsory.

1. Choose the correct answers : $1 \times 5 = 5$
 - (a) To close the end of a pipe we can use a
 - (i) Plug
 - (ii) Socket
 - (iii) Tee
 - (iv) Nipple
 - (b) Identification of pipelines carrying different liquids and gases is done by
 - (i) diameter
 - (ii) colour
 - (iii) altitude at which the pipe is located
 - (iv) material

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(c) The most economical valve for use with large diameter pipes is

- (i) Globe valve
- (ii) Needle valve
- (iii) Gate valve
- (iv) Butterfly valve

(d) The joint obtained by overlapping the plates and then welding the edges of the plates is known as

- (i) Butt
- (ii) Fillet
- (iii) Tee
- (iv) Corner

(e) A short piece of pipe having threads on the outer side is called a

- (i) nipple
- (ii) plug
- (iii) tubing
- (iv) socket.

2. Write direct answers :

$$1 \times 10 = 10$$

- (a) Stoneware and concrete pipes are mostly used in the form of sewers.
- (b) Automatic controller does not have feedback.
- (c) Butt joint is an example of welded joint.
- (d) Caps are not used to close a flow-line.
- (e) Thin-walled tubings are joined by soldering or by compression.

- (f) Name a fitting to introduce a branch line.
- (g) Name a fitting to change the diameter of a flow line.
- (h) Which valve is used to control the flow of fluids ?
- (i) What is the function of check valves ?
- (j) Name two metals used for welding.

3. Draw any *one* of the following : $5 \times 1 = 5$

- (a) A fitting for changing the direction of lines.
- (b) A fitting for changing the diameter of lines.

4. Draw any *five* of the following : $8 \times 5 = 40$

- (a) Screwed socket joint
- (b) Bell and spigot joint
- (c) Union joint
- (d) A check valve
- (e) Double V Butt joint
- (f) Double Lap joint.

5. Draw any *one* of the following :

10

- (a) Gate valve
- (b) Globe valve
- (c) Automatic Control valve.