

Total No. of printed pages = 4

**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 : 1×5=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

[Turn over

(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 :

1×10=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.