

Time: 3 Hours

Total Marks:80

- [1] Question No. 1 is compulsory
- [2] Attempt any three questions out of remaining five questions
- [3] Figure to right indicate full marks
- [4] Assume suitable data if necessary.
- [5] Notations carry usual meaning.

Q.1 a) Complete the table

{05}

NPS	NB	OD
		21.3
		141.3
	40	
2 1/2"		
10"		

b) Give full form of OISD, ASTM, ASME, LSTK, EPC

{05}

c) State dimensional standards for small bore and large bore fittings, flanges of all sizes, CS and SS pipes, O'let fittings, swaged nipple

{05}

d) State the preferred material for 4" NPS SS flange, 1" NPS LAS elbow, 14" NPS CS tee, 4" Seamless CS pipe, 6" NPS LTCS reducer

{05}

Q.2 a) State preferred location for the following in the plot plan with reason

{10}

1. Flare
2. Outdoor process plant
3. Tank Farm
4. Cooling tower station
5. Electric receiving station

b) Differentiate between pipe and tube

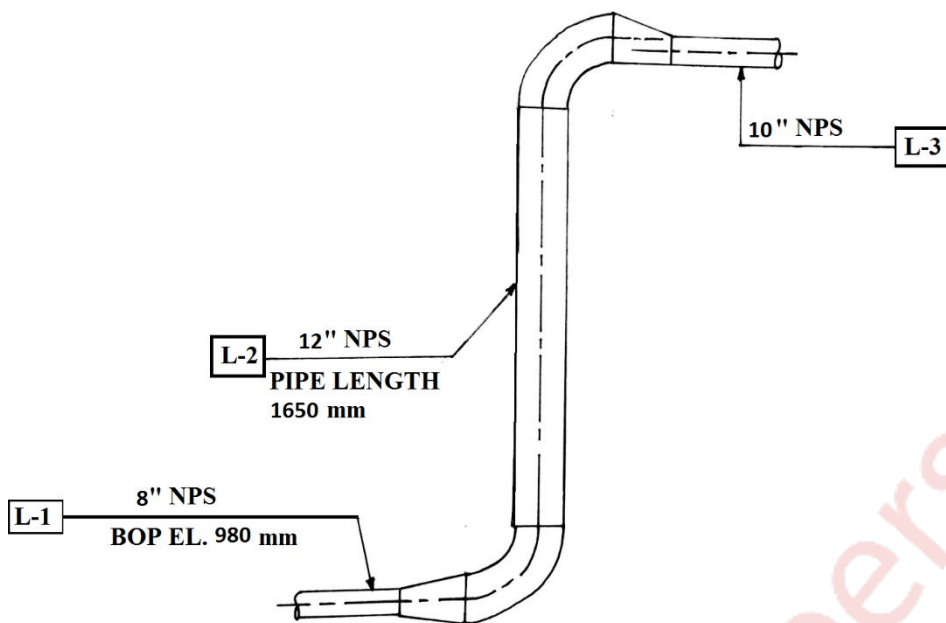
{05}

c) Differentiate between bend and elbow

{05}

Q.3 a) Find BOP of pipe spool L-3

{10}



b) Explain functions and types of steam traps and explain thermodynamic steam trap in detail. {10}

Q.4 a) Calculate pipe thickness for following conditions, Working pressure 1150 psi, working temperature 350° F, Size 4" NPS Seamless, MOC A106 Gr. B, Take Y= 0.4 {10}

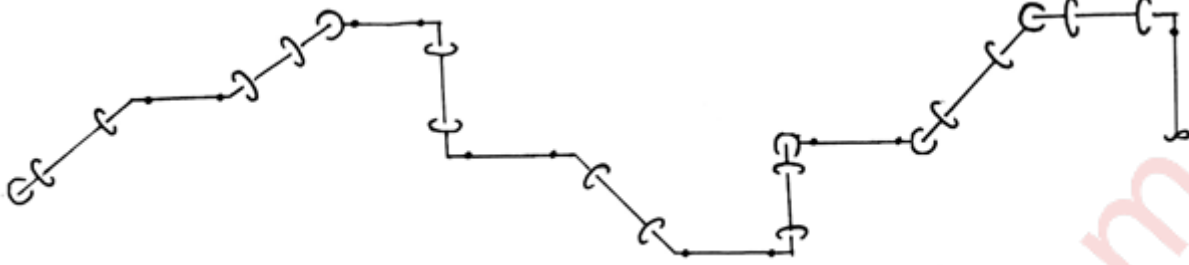
b) Write the appropriate branching component to be used for following branching requirement and the dimensional standard for particular component. {10}

Sr. No.	Size (Header" X Branch")
1	6" X 1 (1/4)"
2	20" X 14"
3	10" X 3/4 "
4	3" X 1 1/2"
5	8" X 4"
6	20" X 16"
7	10" X 2 (1/2)"
8	12" X 1 (1/2)"
9	24" X 16"
10	12" X 1(1/2)"

Q.5 a) What are the codes, standards & standard practices? State their significance. {10}

b) Explain breather valve and flame arrester in detail {10}

Q.6 a) Drawing shows the Plan of the piping assembly draw the Elevation view. {10}



b) Draw circuit diagram of distillation column & explain function of each in the circuit. {10}

