

- [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)** State the preferred material for 4” NPS SS Elbow, 1” NPS LAS equal tee, 16” NPS CS tee, 6” Seamless CS pipe, 8” NPS LTCS flange **{05}**
- b)** Give full form of OISD, ASTM, ASME, LSTK, EPC **{05}**
- c)** Complete the table **{05}**

NPS	NB	OD
6”		
	65	
	32	
1 1/2”		
		21.3

- d)** State dimensional standards for small bore and large bore fittings, flanges of all sizes, CS and SS pipes, O’let fittings, swaged nipple **{05}**

Q.2 a) Calculate pipe thickness for following conditions, Working pressure 1450 psi, working temperature 450° F, Size 6” NPS Seamless, MOC A106 Gr. B, Take Y= 0.4 **{10}**

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

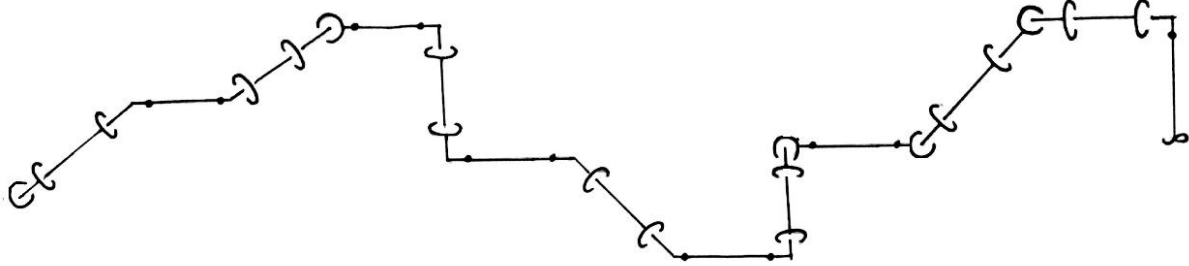
Q.3 a) What are the codes, standards & standard practices? State their significance. **{10}**

- 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	12" X 6"
2	22" X 20"
3	10" X 3/4 ”
4	2" X 1 1/2”
5	8" X 4”
6	22" X 16”
7	10" X 2 (1/2)”
8	14" X 1 (1/2)”
9	20" X 16”
10	8" X 1(1/2)"

Q.4 a) Draw plan of the following.

{10}

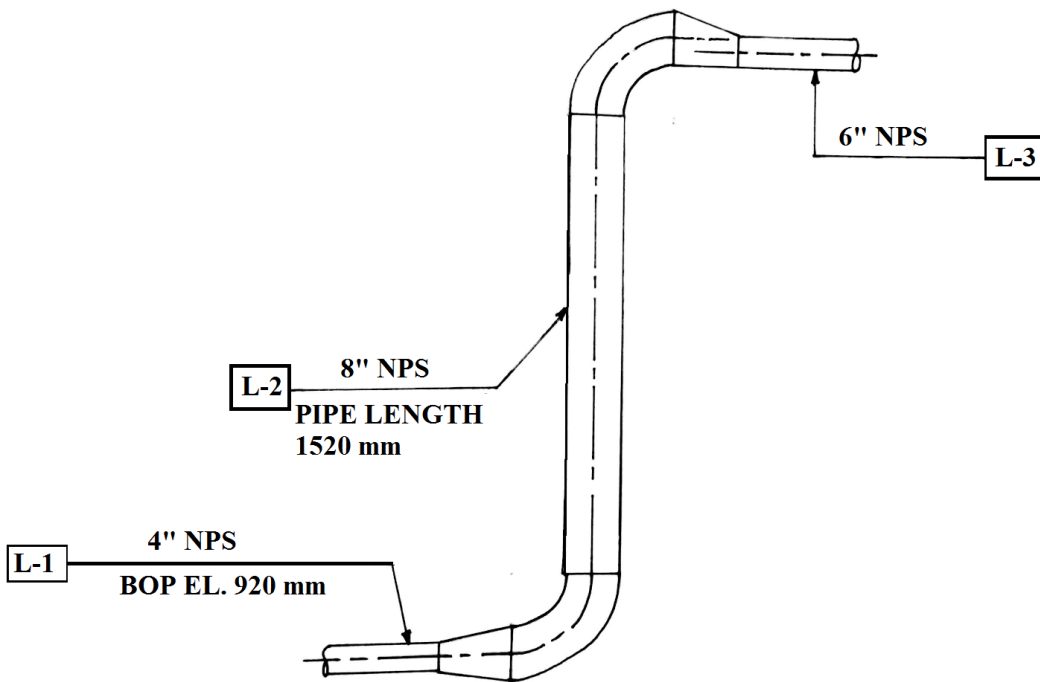


ELEVATION

b) Draw typical pump suction and discharge piping with explanation of each component. Also state why specific length of pipe spool is maintained at suction and discharge line near the nozzle. {10}

Q.5 a) Find BOP of pipe spool L-3

{10}



b) Explain P&ID and line list

{05}

c) Differentiate between bend and elbow

{05}

Q.6 a) Explain different types of strainers **{05}**

b) State preferred location for the following in the plot plan with reason **{05}**

1. Tank farm
2. Outdoor process plant
3. Weighing bridge
4. Cooling tower station
5. Electric receiving station

c) Give classification of flanges and gaskets with dimensional standards. **{10}**
