BE – Sem-VII (CBSGS) Mech – Piping Engg 21/12/16

Piping Engineering

QP CODE : 794101

(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) With sketch explain breather valve and flame arrester {05}

b) Explain P & ID and Line list in detail. {05}

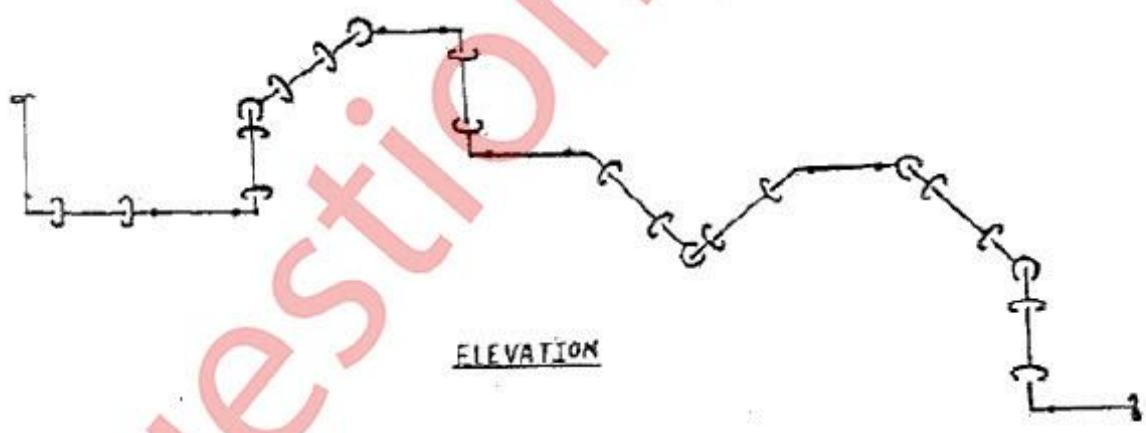
c) State the preferred material for 4" NPS SS Elbow, 1" NPS LAS equal tee, 16" NPS CS Flange, 6" Seamless CS pipe, 8" NPS LAS flange {05}

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) 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}

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

Q.3 a) Draw plan of the following. {10}



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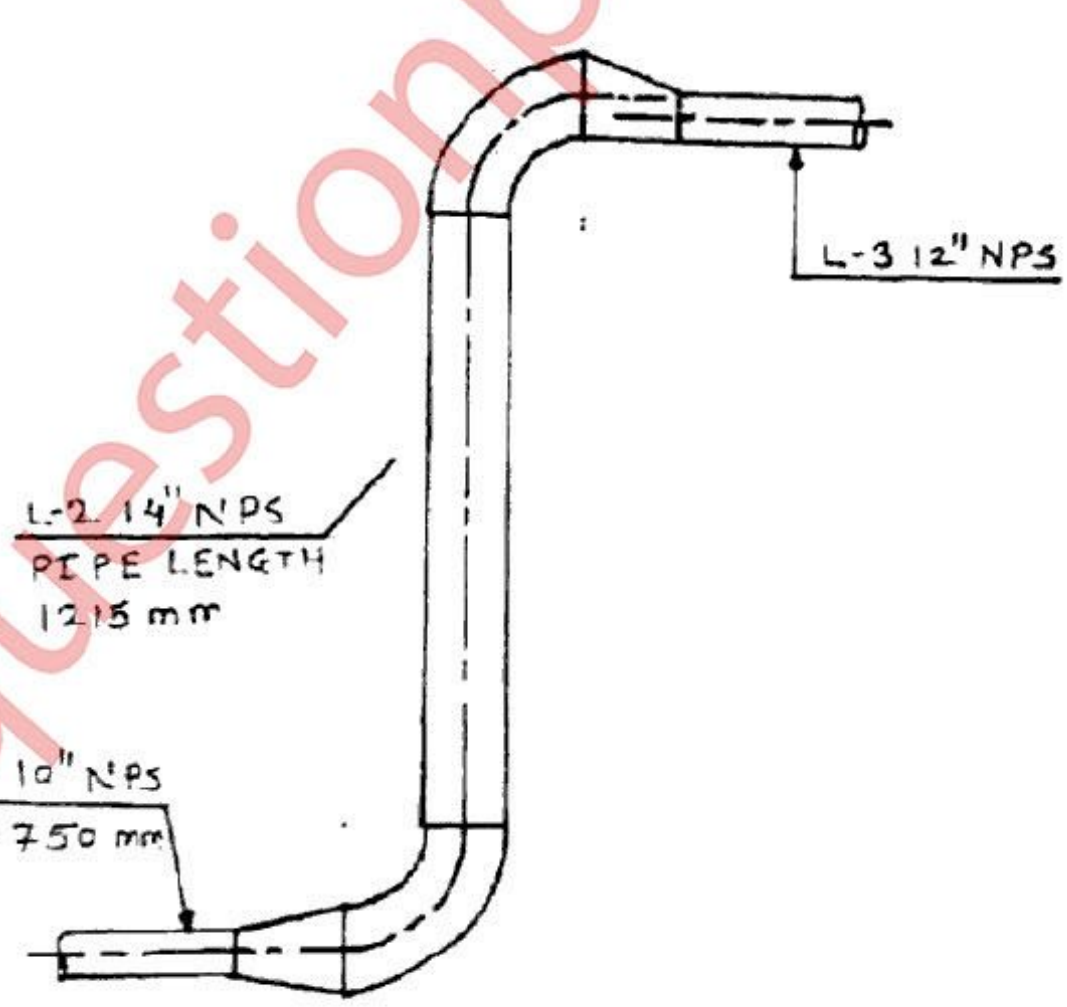
b) Write the appropriate branching component to be used for following branching requirement and the dimensional standard for particular component. {10}

Sr. No.	Size (Header" X Branch")
1	10" X 6"
2	20" X 18"
3	12" X 3/4 "
4	3" X 1 ½"
5	18" X 4"
6	22" X 16"
7	5" X 2 (1/2)"
8	14" X 1 (1/2)"
9	20" X 16"
10	12" X 1(1/2)"

Q.4 a) Calculate pipe thickness for following conditions, Working pressure1720 psi, working temperature 515° F, Size 10" NPS Seamless, MOC A106 Gr. B, Take Y= 0.4 {10}

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

Q.5 a) Find BOP of L-3 {10}



b) Draw and explain typical piping used for control station. {06}

c) Differentiate between elbow and bend {04}

Q.6 a) Give classification of flanges and gaskets with dimensional standards. {10}

b) Complete the following table {05}

NPS	NB	OD
6"		
1 1/2"		
	250	
	80	
		21.3

c) Give full form of OISD, ASTM, ASME, LSTK, EPC {05}
