	Di	GUJARAT TECHNOLOGICAL UNIVERSITY ploma Engineering - SEMESTER-V • EXAMINATION – WINTER • 2()14	
Subject Code: 355502 Date: 28-				
Sub	oject	Name: Piping Engineering		
Time: 10:30 am - 01:00 pm Total Ma			r ks: 70	
	1. 2. 3. 4.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. English version is considered to be Authentic.		
Q.1	(a)	Define the term ` pipe ' ? Explain the classification of pipe / piping based on various criteria?	07	
Q.2	(b)	Explain in brief with tabulated form : MTO used for pipe fabrications	07	
	(a)	Calculate the diameter of pipe to delivered, Q = Discharge = 800 lit / Min of water V = Maximum velocity = 15 M / sec Also find the loss head due to friction [Loss of head/pressure due to friction] in pipe if, Length of pipe = L = 10 k M Assume Co efficient of friction = f = 0.015 Gravitation al constant = g = 9.8 M / sec ² .	07	
	(b)	Compare the following terms with neat sketch : 1. Short radius and long radius Elbow. 2. Pipe and Tubes 3. Normal and Reducer Tee	07	
03	(b)	Explain in brief with neat sketch : - Steam-trap used in piping	07	
Q.5	(a)	List out the various types of drawing used in piping engineering Explain in brief with neat sketches : P. & I. D. used in piping eng.	07	
	(b)	List out the various types of drawing used in piping engineering.? Explain in brief with neat sketches : P. & I. DIAGRAM used in piping eng.	07	
Q.3	(a)	State the reasons to provide : High Point Vent [HPV], Low Point Drain [LPD] in piping engineering liquid storage tank with delivery pipe height from bottom 3d to 5d.	07	
	(b)	Prepare WPQ with help of following data. (Assume suitable addition data, if necessary)1) Matériel2) Pipe dia3) Electrode4) Thickness of pipe5) Welding process4) SMAW		

- 6) Position : 5G/6G Q.4 (a) State functions and duties of piping engineering department.

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	(b)	Explain in brief : codes and standards used for piping eng	07
		OR	
Q. 4	(a)	Explain in brief : The information available on "Nozzle schedule table "	07
		of typical blue print.	
	(b)	A spherical storage tank having:	07
		Out side Diameter of spherical tank $= D_i = 520 \text{ cm}$,	
		Thickness of tank $= t = 10$ mm	
		If the Rate of Painting = $60 \text{ Rs.} / \text{M}^2$	
		If the Rate of raw material $= 100$ Rs. / Kg	
		1] Find out the inside volume of storage tank & Total cost of raw	
		material of tank.	
		2] Find out the Total cost of out side Painting.	
0.5			
	(a)	Describe the impotence of Fasteners' tightening / loosening seq. of	07
		flanges ?	-
	(b)	Define the term ' heat insulation ' ?	07
	(0)	List the various types of insulation & State their properties/applications?	0.
		OR	
0.5	(a)	Explain in brief : - Mechanical seal and gasket	07
	~ /		
	(b)	Define the pipe support and restraint.	07
	(0)	State the function of pipe support	•••
		Classify the pipe support	
		Chabilly the pipe support.	
