Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING – SEMESTER – V • EXAMINATION – SUMMER 2016

Subject Code: 355502 **Date:11/05/2016**

Subject Name: PIP ENG

Time: 02:30 PM TO 05:00 PM **Total Marks: 70**

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Write your seat no. and enrolment no. in the above given space Q. PAPER.
5. Answer with neat sketch and to the point.

Q.1 (a) Describe in brief with tabulated form : MTO used for pipe fabrications **07**

(b) Define the term ` pipe ' ? **07**
Describe the classification of pipe / piping based on various criteria?

Q.2 (a) Calculate the diameter of pipe to delivered , **07**
Q = Discharge = 400 lit / Min of water
V = Maximum velocity = 10 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 / sec².

(b) Describe in brief in brief with neat sketch : High Point Vent [HPV] , Low Point Drain [LPD] in piping engineering liquid storage tank with delivery pipe height from bottom of the tank 3d to 5d (i.e. d= pipe dia .) **07**

OR

(b) Describe in brief with neat sketch : - STAINER used in piping ENG. **07**

Q.3 (a) Prepare WPQ with help of following data. (Assume suitable addition data , if necessary) **07**

1) Material	:	SA 516 GR 70
2) Pipe dia	:	600 mm
3) Electrode	:	E-7018 of Φ 4 × 450 mm
4) Thickness of pipe	:	10 mm (assume)
5) Welding process	:	SMAW
6) Position	:	5G/6G

(b) List out the various types of drawing used in piping engineering **07**
Describe in brief with neat sketches : P. & I. D . used in piping eng.

OR

Q.3 (a) **07**
Draw a neat sketch and compare the following terms(Any 2)

(1) Short radius and long radius elbow.
(2) Eccentric and concentric reducer.
(3) Normal and reducer T.

(b) Describe the impotence of Fasteners' tightening / loosening seq. of flanges ? **07**

Q.4 (a) Describe in brief : codes and standards used for piping eng **07**

(b) Describe in brief : The information available on " Nozzle schedule table " of typical blue print. **07**

OR

Q. 4 (a) Define the pipe support and restraint. **07**
State the function of pipe support.
Classify the pipe support.

(b) State functions and duties of piping engineering department. **07**

Q.5 (a) List out the various types of piping drawings? **07**
(1) Describe in brief: - Piping ISO. **07**

(b) Define the term ' heat insulation ' ? **07**
List the various types of insulation & State their properties/applications ?

OR

Q.5 (a) Describe in brief :- The phenomena and Causes of pressure drops' in piping and their causes. **07**

(b) 1. Define the term " pipe purging " ? **07**
2. List the Different types of purging systems ?
3. Describe in brief :- The features of pipe purging process ?

THE END BEST OF LUCK

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