Total No. of Printed Pages:2

SUBJECT CODE NO:- H-225
FACULTY OF SCIENCE AND TECHNOLOGY
B.E. (Mechanical) (Sem-II)
Elective-II: Piping System Engineering
[Revised]

[Time: Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B.:(i) Solve any three questions from each Section.
(ii) Use of data book/property tables is permitted.
(iii) Marks are reserved for figures, charts, graphs wherever necessary.
(iv) Assume suitable data if required.

Section A

Q.1	A. Describe ASME 31.4 and ASME 31.5 codes in piping.	06
	B. Explain the scope of piping engineering.	07
Q.2	A. Sketch commonly used pipe fittings, flanges & fasteners.	06
	B. Discuss what is Pressure Temperature (P-T) rating.	07
Q.3	A. Explain economic velocity.	06
	B. How will you determine the pressure drop for compressible and non-compressible fluids?	07
Q.4	A. Explain different types of elbows, Tee(T).	06
	B. Describe methods of pipe network analysis.	07
Q.5	Write Short notes on (Any Two) 1. Safety valves 2. Fasteners 3. Threaded joints	14

Section B

Q.6	A. Enlist ASME/ANSI/API standards for piping materials.	06
	B. Explain selection, properties and use of piping materials for cryogenic systems.	07
Q.7	A. Sketch a sample P&ID diagram of fluid storage and distribution for simple application.	06
	B. Explain piping isometrics with neat sketch.	07
Q.8	A. Explain costing for piping networks.	06
	B. Discuss how CADD (Computer Aided Design and Drafting) is used in PFD & P&ID preparation.	07

Q.9 A. Explain the effects of water hammer on a pipe/pipe network and methods to avoid it. 06

B. Describe the different support in piping networks. 07

Q.10 Write Short notes on (Any Two) 14

1. Corrosion resistant materials
2. Critical thickness of insulation
3. Pipe stresses