

GUJARAT TECHNOLOGICAL UNIVERSITY**Diploma Engineering - SEMESTER – IV • EXAMINATION – WINTER 2012****Subject code: 345503****Date: 27/12/2012****Subject Name: Plant Equipment Maintenance and Erection****Time: 02.30 pm - 05.00 pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. English version is considered to be Authentic.

- Q.1** (a) Define the maintenance. Explain primary and secondary function of maintenance engineering department **07**
- (b) List the TEN types of maintenance. Explain any THREE in brief **07**
- Q.2** (a) Differentiate centrifugal pump with reciprocating pump with neat sketch **07**
- (b) Give classification of valves and write in brief gate valve with neat sketch **07**
- OR**
- (b) Describe centrifugal compressor with neat sketch. **07**
- Q.3** (a) Draw schematic diagram of thermal power plant and label its different elements and write application of each element **07**
- (b) Draw neat sketch and label its part and write application of 1. pressure vessel 2. column 3. heat exchanger **07**
- OR**
- Q.3** (a) Explain working principle, advantages and limitation with neat sketch of metal spraying technique. **07**
- (b) Write causes and remedies of 1. galvanic corrosion 2. erosion corrosion 3. stress corrosion **07**
- Q.4** (a) Write brief note on TPM and CBM **07**
- (b) Give definition, principle, causes and remedies of different types wears in tabulation form. **07**
- OR**
- Q.4** (a) Write brief note on maintenance history card and check list with typical format **07**
- (b) Describe need of IBR and explain procedure for boiler inspection as per IBR regulation. **07**
- Q.5** (a) State major important steps of advance planning and site operation of erection installation of process equipment **07**
- (b) Give classification of foundation and explain design consideration of it **07**
- OR**
- Q.5** (a) List factors affecting selection of piping material and give application of seven types of pipe fitting with neat sketch. **07**
- (b) State methods of promoting service life of pressure vessel **07**
