

GUJARAT TECHNOLOGICAL UNIVERSITY
PDDC - SEMESTER-IV EXAMINATION – SUMMER 2016

Subject Code: X41903**Date: 01/06/2016****Subject Name: Power Plant Engineering****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain the Unique features of the High pressure boiler. **07**
 (b) Explain La Mount boiler with neat sketch **07**
- Q.2** (a) Draw a schematic diagram of diesel power plant and discuss different parts in short. **07**
 (b) Discuss any two types of ash handling system. **07**
- OR**
- (b) Write note on steps involved in coal handling system with neat sketch. **07**
- Q.3** (a) Discuss working of evaporative condenser with neat sketch. **07**
 (b) Exhaust steam having a quality of 0.9 enter a surface condenser at an absolute pressure of 0.13 bar and comes out as a water at 45⁰C. The circulating water enters at 30⁰C and leaves at 40⁰C. Estimate quantity of circulating water and condenser efficiency. **07**
- OR**
- Q.3** (a) What is the function of cooling towers in thermal power plant? Classify them. Describe with neat sketch the working of Hyperbolic cooling tower. **07**
 (b) Write short note of effect of different pollutants on the human health and vegetation. **07**
- Q.4** (a) Explain different component of Nuclear reactor with neat sketch. **07**
 (b) Explain with neat sketch Boiling Water Reactor (BWR). **07**
- OR**
- Q.4** (a) Draw and explain the General layout of a Modern Power Plant. **07**
 (b) Explain with neat sketch chain grate stoker. **07**
- Q.5** (a) Write short note on different Impurities in water and their effects. **07**
 (b) Discuss the external water treatment. Explain with neat sketch Zeolite water treatment. **07**
- OR**
- Q.5** (a) What is the load curve? What is the significance of load curve? What do you understand by load factor and diversity factor? **07**
 (b) Write short note on the Balanced Draft. **07**
