

Seat No.	
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**SL-348**

Total No. of Pages : 2

**B.E. (Mech.) (Semester-VIII) (Old)**  
**Examination, April - 2017**  
**POWER ENGINEERING**  
**Sub. Code : 49419**

Day and Date : Saturday, 29-04-2017

Total Marks : 100

Time : 2.00 p.m. to 5.00 p.m.

- Instructions :
- 1) Attempt any three questions from each section.
  - 2) Figures to the right indicate full marks.
  - 3) Assume suitable data if necessary.

**SECTION-I**

- Q1) a) Discuss in short NTPC, NHPC, NPCIL & IGEC. [8]  
b) Give the Indian Electricity Grid Code in brief. [8]
- Q2) a) Explain the general layout of I.C. Engine power plant by drawing a neat sketch. [8]  
b) A generating power plant supplies the following loads to various consumers as listed below: [8]  
Industrial = 750mw; commercial = 350mw  
Domestic power = 10mw & Domestic light = 50mw  
If the maximum demand on the station is 1000mw & energy generated is  $50 \times 10^5$  mwh per year, Determine (i) Diversity factor, (ii) Annual load factor.
- Q3) a) Explain MHD- steam plant. [8]  
b) Explain various Tariff methods. [8]
- Q4) Write short note on (Any Three). [18]  
a) Load curve & load duration curve  
b) Thermoelectric steam plant  
c) Peak load & base load plants  
d) Gas Turbine power plants

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SECTION-II

- Q5) a) Explain how the smoke density is measured. [8]  
b) Explain with neat sketch the method for measurement of pH value of water. [8]
- Q6) a) Explain the Battery Technology in storage of energy. [8]  
b) What do you mean by Ultracapacitors? Explain with the help of neat sketch. [8]
- Q7) a) What do you mean by thermal pollution? Explain the effects of thermal pollution. [8]  
b) What do you mean by 'particulate matter'? What are the effects of the same on environment? Explain the methods to control it. [8]
- Q8) Write short note on the following (Any Three). [18]  
a) Nuclear Radiation detector.  
b) Energy management techniques.  
c) Energy marketing.  
d) Cooling water system in power plants.

