

4E4174

Roll No. /

[Total No. of Pages : 2]

4E4174

B.Tech. IV Semester (Main/Back) Examination, May - 2018  
Electrical Engg.

4EE4A Generation of Electrical Power

Time : 3 Hours

Maximum Marks : 80

Min. Passing Marks : 26

Attempt any five questions, selecting one question from each unit. All Questions carry equal marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly). Units of quantities used/calculated must be stated clearly. Use of following supporting material is permitted during examination.

**Unit - I**

1. a) Explain by help of neat & clean diagram working and construction of a closed cycle gas turbine plants. (8)
- b) Describe basic schemes of hydroelectric & pumped storage plant of Hydro power plant. (8)

**OR**

1. a) Explain Nuclear fission type of Nuclear power plant. (8)
- b) Write a short note on conventional energy? Generation methods in India also describe efficiencies of various power plant. (8)

**Unit - II**

2. a) In New energy sources of Generation of Electrical power explain impact of thermal power station on environment. <http://www.rtuonline.com> (8)
- b) Explain the concept of Non Renewable energy sources in Electrical power Generation? (8)

**OR**

2. a) Write a short note on effect & phenomena of Green house effect? (8)
- b) Describe briefly electric energy generation by help of solar power. (8)

**Unit - III**

3. Explain the following Maximum demand, demand factor, load factor, diversity factor, capacity factor utilization, chronological load curve and load duration curve. (16)

**OR**

3. a) Explain power factor improvement using capacitor and condensers. (8)  
b) What is power factor explain its causes and effect of low power factor? (8)

**Unit - IV**

4. a) Explain the phenomena of capital cost of plant, also explain annual fixed and operating cost of plants by help of suitable example. (8)  
b) Describe the phenomena of effect of load factor on unit energy cost. Also describe role of load diversity in power system economics. (8)

**OR**

4. a) Describe uses of calculation of most economic power factor for KW and KVA constant demand. <http://www.rtuonline.com> (8)  
b) Explain phenomena of co-generation and energy conservation. (8)

**Unit - V**

5. a) What is objective of tariffs, explain straight and block meter rate? (8)  
b) Explain power factor dependent tariffs and three part tariff with suitable example. (8)

**OR**

5. a) Explain concept of optimization while selection and location of power plant is done? Also explain concept of Base and peak load. (8)  
b) Explain comparative study done for nuclear and gas power plant. (8)

<http://www.rtuonline.com>

Whatsapp @ 9300930012

Your old paper & get 10/-

पुराने पेपर्स भेजे और 10 रुपये पायें,

Paytm or Google Pay से