

**M.E DEGREE EXAMINATIONS: NOV/DEC 2012**

Third Semester

**ENERGY ENGINEERING**

EEG 569: Power Generation, Transmission and Utilization

**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-**

**PART A (10 x 2 = 20 Marks)**

1. Discuss the merits and demerits of steam power plant
2. Name the different methods of governing of steam turbines
3. What is solar power generation and what are its advantages?
4. How can wind energy be converted into electrical energy?
5. Define load factor and utility factor
6. What are the main points to be considered while fixing the tariff?
7. Define transmission efficiency
8. Explain bus bar arrangements
9. What are the laws of illumination?
10. What are the factors to be considered while selecting the electrical drives.

**PART C (5 x 16= 80 Marks)**

11. a) What are the different methods of governing of steam turbines? Explain them in detail.

**(OR)**

- b) With the help of a neat sketch describe the working of a Pressurized Water Reactor (PWR) used in a nuclear power plant. Discuss the merits and demerits of such a reactor.

12. a) Describe with the help of a neat sketch the working of solar power plant. What are its salient features?

**(OR)**

- b) (i) Explain the tidal power generation in detail. (8)
- (ii) Explain the salient characteristics of wind power generation. (8)

13. a) What do you understand by power factor? Explain the different methods of

improving it.

**(OR)**

- b) What are the different systems of tariff used by the electricity authority? Discuss any two of them in detail.

14. a) Explain transmission efficiency and its regulation.

**(OR)**

- b) Explain EHVAC and HVDC transmission in detail.

15. a) Explain with neat sketch the design of OLTC lighting scheme of industry.

**(OR)**

- b) Explain the electrical and mechanical characteristics of electrical drives.

\*\*\*\*\*