No. of Printed Pages : 2

BIEE-037

DIPLOMA IN ELECTRICAL ENGINEERING (DELVI)

Term-End Examination

00606

June, 2016

BIEE-037 : POWER PLANT ECONOMICS AND CONTROL

Time : 2 hours *Maximum Marks : 70*

Note : *Attempt any **five** questions. Use of scientific calculator is permitted. All questions carries equal marks.*

---

1. Give a general layout of a hydroelectric power plant. Explain the functions of each component of a hydroelectric power plant. Also write their advantages and disadvantages. *14*

2. Explain with a neat sketch, the working of a nuclear power station. Discuss the merits and problems associated with nuclear power stations. *14*

3. Explain optimal hydro-thermal scheduling for economic dispatch in detail. *14*

4. Define and explain the significance of the following terms with illustrations : $4 \times 3\frac{1}{2} = 14$
   (a) Demand Factor
   (b) Load Factor
   (c) Diversity Factor
   (d) Power Factor

5. What is the objective of tariff ? What type of tariff is employed for domestic consumers ? Why is this tariff not employed for bulk consumers ? Suggest and explain the tariff which encourages the consumers to keep load factor and power factor high. *14*

6. Explain the following terms : $4 \times 3\frac{1}{2} = 14$

   (a) Cold Reserve

   (b) Hot Reserve

   (c) Operating Reserve

   (d) Spinning Reserve

7. Explain in detail supervisory control and monitoring system with the help of a neat sketch. *14*