Roll No. Total No. of Pages: 02

Total No. of Questions: 09

B.Tech. (Electronics Engg) (E1 2012 Onwards)/ (Electrical & Electronics) (E1 2013 Batch) (Sem.-6)

DEREGULATION OF POWER SYSTEM
Subject Code: BTEEE-603F

Paper ID: [72847]

Time: 3 Hrs. Max. Marks: 60

INSTRUCTIONS TO CANDIDATES:

- SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
- 2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
- 3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Answer briefly:

- a. Write any three problems of power pool.
- b. Define any two objectives of deregulation in power system.
- c. Define the total revenue and marginal cost of electricity.
- d. Write any four differences between wholesaler and retailer electricity market,
- e. Write the components of restructured electricity market.
- f. What do you mean by ancillary services?
- g. Write the name of any four countries where price of electricity is decided by the Power pool.
- h. Define the Vertical integrated utility (VIU).
- i. Draw the block diagram of mandatory transaction model of electricity market.
- j. Write the different time horizon in marketing of the electricity.

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SECTION-B

- 2. Explain the congestion management methodologies.
- 3. Explain the term transmission open access and also explain how the transaction cost are allocated.
- 4. What are different role of ISO for competitive electricity market?
- 5. Explain the evolution of the role of the transmission provider (T.P.).
- 6. Explain the different types of problems related to power pool.

SECTION-C

- 7. Draw and explain the three different model of electricity market.
- 8. A monopolist faces the following demand curve :

$$O = 144/P^2$$

where Q is the quantity demanded and P is price. Its average variable cost is

$$AVC = Q^{1/2}$$

and it's fixed cost is 5.

- a. What are its profit-maximizing price and quantity? What is the resulting profit?
- b. Suppose the government wants to set a ceiling price that induces the monopolist to produce the largest possible output. What price will do this?
- 9. Explain any five components of restructured systems representing the various segments of electricity market.