

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)
(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY,
THIRUVANANTHAPURAM)
THIRD SEMESTER M.TECH DEGREE EXAMINATION (Regular), FEBRUARY 2022
POWER SYSTEMS
(2020 Scheme)

Course Code: 20EEPST231**Course Name: Power System Economics****Max. Marks: 60****Duration: 3 Hours****PART A***(Answer all questions. Each question carries 3 marks)*

1. Discuss about the theory of demand in deregulated electricity market.
2. Differentiate between short-run cost and long-run cost
3. Explain the term FTR and its significance in transmission congestion management.
4. Briefly explain the significance of FACTS devices in energy market.
5. Define 'Equal Area Criteria' for stability enhancement.
6. Briefly explain the term 'Transfer Stability' for generators
7. What is the effect of reactive loading in a distribution transformer?
8. What are the different loss components? Differentiate between load factor and loss factor.

PART B*(Answer one full question from each module, each question carries 6 marks)***MODULE I**

9. Discuss about various market entities associated with the electricity market. (6)

OR

10. Discuss in detail about electricity market structure and explain each model's role (6)

MODULE II

11. Differentiate between oligopolistic and monopolistic markets? What are its salient features? (6)

OR

12. a) Explain the term price discrimination in energy market and how it is classified? (4)
b) Discuss about its advantages and disadvantages. (2)

MODULE III

13. Explain the framework for VAR calculation in a) Generation asset valuation (6)
b) Generation capacity valuation

OR

14. a) Explain the term 'Transmission Congestion Management and Pricing' in energy market. (2)
- b) What are the different methods of calculation for transmission congestion pricing? Explain any two in detail. (4)

MODULE IV

15. Explain the significance of DGs in various perspective of energy market. (6)

OR

16. a) Explain the term ATC. (3)
- b) Explain the significance of ATC in various perspective of energy market. (3)

MODULE V

17. Define the term 'Transfer Instability' and briefly explain the basic causes. (6)

OR

18. What are the criteria for stability of power system? Explain the effect of capacitor on system stability. (6)

MODULE VI

19. Explain the different customer categories in power tariffs. (6)

OR

20. Discuss about the power system losses. Briefly explain any three methods for loss reduction. (6)
