

Roll No.

24423

B. Tech. (EE) 7th Semester (Re-appear)

Examination – October, 2020

POWER SYSTEM OPERATION AND CONTROL

Paper : EE-405-F

Time : 1.45 Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any *three* questions. All questions carry equal marks.

1. (a) Define Load Management.
- (b) State unit commitment problem and state a method to solve it.
- (c) What is the transient stability ? Explain briefly.
- (d) Discuss the role of AVR.

2. What is generator and governor model of automatic generation control of electric power ?
3. (a) Define the economic dispatch problem. How is the problem of unit commitment is formulated ? Discuss.
- (b) Explain the Load frequency control for single area case.
4. (a) Explain optimal generation schedule.
- (b) Discuss reliability considerations.
5. (a) Discuss optional operation of generations of Bus bar.
- (b) How fuel cost in hydrothermal power station is minimized ?
6. (a) Explain equal area criteria for the stability of system.
- (b) Explain the steady state stability, transients stability, dynamic stability.
7. Explain the stability of electric generation unit. Explain dynamic stability of the synchronous machine.

8. Write notes on :

(i) Power system stabilizers

(ii) Type 0 and 1 excitation system

9. Explain voltage collapse, modeling & prevention.

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