

CBCS Scheme

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16/17EPS23

Second Semester M.Tech. Degree Examination, June/July 2018

Switching in Power Systems

Time: 3 hrs.

Max. Marks: 80

Note: Answer FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. What is the purpose of switching in Electric Power System? Explain. (08 Marks)
b. What is TRV? With reasons explain how the interruption process is affected by TRV. (08 Marks)

OR

- 2 a. How Asymmetrical current varies in three phase systems. (08 Marks)
b. What are Transformer limited faults? Explain. (08 Marks)

Module-2

- 3 a. How short line faults on overhead lines cause travelling waves? Explain. (08 Marks)
b. When does the out of phase switching occur, explain. (08 Marks)

OR

- 4 a. Explain Normal load switching. (08 Marks)
b. Explain current interruption in a single phase capacitive load circuit. (08 Marks)

Module-3

- 5 a. What is EMTP? Explain EMTP representation of inductance and capacitance. (08 Marks)
b. Explain current interruption by arc elongation in air. (08 Marks)

OR

- 6 a. What are the types of Airblast circuit breakers? Explain. (08 Marks)
b. With the help of neat sketches, explain current interruption in Bulk oil circuit breakers. (08 Marks)

Module-4

- 7 a. How oil circuit breakers are classified? Explain each. (08 Marks)
b. Explain the current interruption process in air circuit breakers. (08 Marks)

OR

- 8 a. Explain self blast SF₆ circuit breakers. (08 Marks)
b. Explain any one principle used to avoid vacuum Arc when breaking high currents. (08 Marks)

Module-5

- 9 a. What is Generator current breaking? What are the points which distinguish it from General Purpose circuit breakers? (08 Marks)
b. With the help of neat figure, explain Generator Circuit breakers. (08 Marks)

OR

- 10 a. What are earthing switches? Explain. (08 Marks)
b. Explain Disconnecter switching in GIS. (08 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.