M.E. Second Semester (Electrical (Electronics & Power) Engineering) (New-CGS)

13320 : Digital Protection of Power System : 2 EEPME 1

P. Pages : 2

Time : Three Hours

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AW - 3582

Max. Marks : 80

Notes : 1. Answer **Three** question from Section A and **Three** question from Section B.
2. Assume suitable data wherever necessary.
3. Illustrate your answer necessary with the help of neat sketches.

SECTION – A

1. a) Explain basic Block diagram of digital relay. 7

   b) Explain Analog and digital multiplexer. 7

OR

2. a) Explain numerical relay in detail. 7

   b) What is function of filter. Explain its types. 7

3. a) Draw and explain flowchart for relay coordination. 7

   b) Give an estimate of relay operating time. 6

OR

4. a) Explain the time multiplier setting and plug multiplier setting in current relay. 6

   b) Explain in detail protection of an interconnected system. 7

5. a) Explain types of fault in overhead transmission line. 7

   b) Explain induction type cylinder frequency relay. 6

OR

6. a) Explain various types of frequency relay. 7

   b) State and explain rate of frequency decline. 6

SECTION – B

7. a) State and explain Re-closing relay and its operation. 7

   b) Explain different precautions to be follow during reclosing. 7

OR

8. a) Explain the problems associate with relay during compensation. 7

b) Explain in details. 7
i) Single shot reclosing Relay. ii) Multi shot reclosing Relay.

9. a) What are recent developments in relaying principle. 7

b) Explain mathematical algorithm for location of fault. 6

OR

10. a) Explain Adaptive protection. 7

b) Explain protection of transmission line based upon travelling wave phenomenon. 6

11. a) State and explain Fourier Algorithm with suitable examples. 7

b) State the implementation of integral LSQ fit method. 6

OR

12. a) Explain Digital harmonic filtering. 7

b) Explain in detail full cycle window. 6

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