

M.TECH DEGREE EXAMINATION

Model Question Paper

Second semester

Branch: Electrical and Electronics Engineering; Specialization: Power Systems & Control

EPC 2001 DIGITAL PROTECTION OF POWER SYSTEM

(2013 admission onwards)

[Regular/ Supplementary]

Answer any *two questions* from each module

Time: Three hours

Maximum:60 marks

Module I

1. Explain various types of fault and their effect. (10)
2. Derive the expression of an unsymmetrical fault current when a fault occur in
Transmission line. (10)
3. What are the effect of steady state CT saturation on the relay performance. (10)

Module II

1. Discuss about the Fourier full cycle and half cycle Algorithm . (10)
2. Explain the features of Ant aliasing filters of a protective relay. (10)
3. With the help of relevant expression, describe the use of replica impedance
in protective relays. (10)

Module III

1. Derive the expression for computing positive sequence impedance for phase ground fault and phase-phase fault in distance relay. (10)
2. Describe the various protective functions, which can be integrated in a synchronous Generator. (10)
3. With the help of graphical plots, explain the magnetizing inrush phenomenon associated with power transformers. (10)