

SUBJECT CODE NO:- P-8183
FACULTY OF ENGINEERING AND TECHNOLOGY
M.E.(Electrical Power Systems) Examination MAY/JUNE-2016
Digital Protection of Power System
(Revised)

[Time:Three Hours]

[Max Marks:80]

“Please check whether you have got the right question paper.”

- N.B
- i) Solve any two questions from each section.
 - ii) Assume suitable data, wherever necessary.

Section A

- Q.1 a) What is solid state relay? What are their advantages & limitations? Explain basic construction of solid state protective relay. 10
- b) What is solid state differential relay scheme? What are their types? Explain any one with neat diagram. 10
- Q.2 a) Explain & draw solid state protection scheme for transformer. 10
- b) Explain & draw solid state protection scheme for busbar. 10
- Q.3 a) What are the devices used for interfacing to microprocessor? Explain each one with neat diagram 10
- b) Describe a microprocessor based data acquisition system to acquire the simultaneous sample to both voltage & current signals with interface diagram. 10

Section B

- Q.4 a) Describe the realization of directional distance protection scheme using microprocessor. Draw its interface diagram. 12
- b) What are the advantages of digital protection? explain 08
- Q.5 a) With the help of block diagram, explain operation of numerical relay. What is multifunction numerical relay? Explain 10
- b) Why DFT or Fourier service is used? Write Fourier representation of signals. What is the significance of FFT? 10
- Q.6 a) Explain numerical algorithm for over current relay using DPS technique. 10
- b) How the simulations of transients are done? Which tool used for it? explain any one in detail 10