

SUBJECT CODE NO:- 8033
FACULTY OF ENGINEERING AND TECHNOLOGY
M.E.(Electrical Power Systems) Examination Nov/Dec 2015
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 the suitable data, wherever necessary.

SECTION-A

- Q1.
- a) Explain & draw induction disc relay, induction cup relay, moving coil relay & armature relay. 10
 - b) What is solid state relay? What are their advantages & limitations? Explain basic construction of solid state protective relay. 10

- Q.2
- a) Explain with neat diagram the solid state over current relay. Classify its types by time- current characteristics & draw. 10
 - b) Draw & explain solid state distance relay scheme. Explain its application. 10

- Q.3
- a) What are various microprocessors? What are their buses? Explain 8085 architecture 10
 - b) Describe a microprocessor – based data acquisition system to acquire the simultaneous samples of both voltage and current signals with interface diagram 10

SECTION-B

- Q.4
- a) What are the parameters sensed to avoid unwanted load shedding? How? Describe the realisation of load shedding scheme using microprocessor. 10
 - b) Describe the realisation of over voltage & under voltage relay using microprocessor. Draw interface diagram. 10

- Q.5
- a) Describe the principle of DSP in protection system. How is this method of protection different from microprocessor method. 10
 - b) With the help of block diagram, explain operation of numerical relay. What is multifunction numerical relay? Explain. 10

- Q.6
- a) What are the DSP 320 series ICs? Write its features & explain the basic architecture 10
 - b) How the simulation of transients are done? Which tool used for it? Explain any one in detail. 10