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**CODE NO:- Z-8184**

**FACULTY OF ENGINEERING**  
**M.E (EPS) Year Examination - June – 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) Attempt any two questions from each section.

**SECTION-A**

- Q.1 a) Develop the data acquisition system for protection scheme. 10  
b) Write the advantages of digital protection. 10
- Q.2 a) Develop a numeral algorithm for protection relaying. 10  
b) Draw and explain the solid state protection scheme for transformers. 10
- Q.3 a) Describe the cosine type phase comparator. 10  
b) Describe the types of electro-mechanical relays. 10

**SECTION -B**

- Q.4 a) What do you understand by static relays? Name different components used in a typical static relaying scheme. 10  
b) Discuss the theory and basic principle of digital protection of a transmission line. 10
- Q.5 a) Discuss with the help of neat diagrams the hardware and software of the digital protection scheme using distance relays. 10  
b) Discuss the theory and principle of operation of a microprocessor based percentage differential relay scheme for the protection of a transformer. 10
- Q.6 a) Explain the process of computing Fourier transform in discrete digital domain. 10  
b) Draw and explain PT modeling with reference to standards. 10