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**SUBJECT CODE NO:- H-1630**  
**FACULTY OF ENGINEERING AND TECHNOLOGY**  
**ME (Electrical Power System)**  
**Digital Protection of Power System**  
**(REVISED)**

[Time: Three Hours]

[Max.Marks:80]

Please check whether you have got the right question paper.

N.B

1. Solve any two questions from each section.
2. Draw neat diagram and assume suitable data.

**Section A**

- |     |   |    |
|-----|---|----|
| Q.1 | a) Explain various types of protective relays   | 10 |
|     | b) Explain digital protection with advantages of it   | 10 |
| Q.2 | a) Describe various types of comparators  | 10 |
|     | b) Explain solid state over current relay draw time current characteristics and explain it .  | 10 |
| Q.3 | a) Describe a microprocessor based data acquisition system to acquire the simultaneous samples of voltages and current signals with interfacing diagram | 10 |
|     | b) Explain microprocessor based over current relay with block representation and programs.  | 10 |

**Section B**

- |     |   |    |
|-----|---|----|
| Q.4 | a) Explain a typical static relaying system in detail write the advantages of static relay  | 10 |
|     | b) Explain digital protection system for a power transmission line  | 10 |
| Q.5 | a) Compare DSP based protection system with microprocessor based protection system describe the principle of DSP based protection system. | 10 |
|     | b) Explain with basic architecture the DSP 320 series ICs   | 10 |
| Q.6 | a) What numerical relay. Explain a multifunction numerical relay with neat block diagram  | 10 |
|     | b) What are the advantages of digital protection explain in detail.   | 10 |