Roll No. | | | | | | | | | | | | |

Total No. of Pages : 01

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M.Tech.(Power System) (2013 & Onwards) (Sem.–1)

ADVANCED RELAYING AND PROTECTION

Subject Code : MTPS-104

Paper ID : [E1364]

Time : 3 Hrs. Max. Marks : 100

INSTRUCTION TO CANDIDATES :

1. **Attempt any FIVE questions out of EIGHT questions.**
2. **Each question carries EQUAL marks (20 each)**

Q1 a) Explain design factors affecting performance of protection scheme for various faults,

b) Explain characteristics of protective relays.

Q2 Describe the construction and operation of an inductive type directional overcurrent relay with a neat diagram. Also explain its operational characteristics.

Q3 Explain the principle of distance relays stating clearly the difference between impedance relay, reactance, and mho relay. Indicate the difference on R-X diagrams and show where each type is suitable.

Q4 Describe the type of protection scheme employed for protection of field winding and loss of excitation of alternators.

Q5 a) Describe the differential pilot wire protection of feeder.

b) What are ground faults? Explain protection scheme for such faults.

Q6 Discuss with the help of neat diagram, the hardware and software of the digital protection scheme for transmission lines using distance relays.

Q7 a) Describe the protection scheme which restrain the operation of relay during inrush magnetising current.

b) With the help of neat diagram explain the connection of CT for three phase tansformer.

Q8 Write note on the following :

a) SCADA based protection system.

b) Numerical relay testing.