

Roll No.

23289

**M. Tech. 2nd Sem.
(Electrical Power Systems)
Examination – May, 2016**

ADVANCED POWER SYSTEM PROTECTION

Paper : MTEPS-204

Time : Three Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any *five* questions out of eight questions.

All questions carry equal marks.

1. (a) Explain what are amplitude and phase comparator ?
- (b) Discuss merits and demerits of static relay.

2. Discuss in detail different types of amplitude comparators with neat sketch.
3. (a) Why IDMT relays are widely used for overcurrent Protection ?
(b) Describe and draw Time current characteristics of overcurrent relays and applications.
4. (a) Explain operating Principle of impedance relay and also draw connections of impedance relays.
(b) Explain Static MHO relay using an amplitude comparator.
5. (a) Explain phase comparison type carrier current protection with Schematic diagram.
(b) Discuss the limitations of wire pilot protection.
What type of pilot is used for protection of EHV and UHV transmission lines.
6. Write technical notes on :
 - (a) Transformer protection
 - (b) Protections of alternator
7. Describe the realization of a directional impedance relay using Microprocessor.
8. (a) Explain lightning arrestors or surge divertors.
(b) Discuss Protection of Transmission lines against direct lightning Strokes.