

Roll No .....

**EE/EX-5003 (CBGS)****B.E. V Semester**

Examination, December 2017

**Choice Based Grading System (CBGS)****Switchgear and Protection***Time : Three Hours**Maximum Marks : 70*

- Note:** i) Attempt any five questions.  
ii) All questions carry equal marks.

1. a) What is sequence networks and their interconnection for different types of faults?  
b) What are current limiting reactors and its locations and applications?
2. a) Classify static relays and what is digital relays.  
b) Describe MHO and reactance relay with R-X diagram.
3. a) What are symmetrical components and its applications to power systems?  
b) What is negative sequence and over current, over voltage relays?

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4. a) Describe in detail the co-ordination between motor protection C.B. and a HRC fuse.  
b) Describe Merz-price differential protection of transformer.
5. a) What is power line carrier current protection?  
b) Describe in detail the arc characteristics and current chopping in SF<sub>6</sub> gas, circuit breaker.
6. a) What is the reverse power protections schemes in power systems?  
b) Describe different protection of generators.
7. a) What is B.I.L. and insulation co-ordination?  
b) Describe protection against lightning and what is the use of lightning arrestors.

OR

What is earthing transformers and describe the use of earth wires in power systems?

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