

Total No. of Questions :8]

[Total No. of Printed Pages :2

www.rgpvonline.com

Roll No .....

**EX-603****B.E. VI Semester**

Examination, June 2017

**Switchgear & Protection****Time : Three Hours****Maximum Marks : 70**

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

1. State the necessity of current limiting reactors in power system and classify the reactors on the basis of their location.
2. With the help of sequence network and relevant mathematical expression, derive the expression for fault current on a solidly grounded unloaded alternator when subjected to single line to ground fault.
3. What is meant by directional future of a dirccetional over current relay. Describe the construction principle of operation and application of a directional over current relay.
4. Describe the construction, principle of operation and application of an
  - a) Induction disc and
  - b) Induction cup type of relay
 What is ratio of reset to pickup value in case of these relays?

100

15

www.rgpvonline.com [2]

5. Describe the construction, principle of operation and application of SF<sub>6</sub> circuit breaker.
6. Explain the working principle, construction and merits of minimum oil C.B. with the help of neat sketch.
7. Draw a scheme for earth fault protection of alternator and explain its working principle.
8. Answer any four of the following:
  - a) Differentiate between series and shunt faults.
  - b) Explain what is meant by primary protection and back up protection.
  - c) What are the different methods of Arc interruption?
  - d) Explain in brief reverse power protection of alternator.
  - e) Explain the phenomena of lighting.
  - f) Describe the surge absorbers.

www.rgpvonline.com

\*\*\*\*\*

15

15