Student Exam No._____

Ganpat University
M. Tech. Semester-II (Electrical Engineering)
Regular Examination July-2013
3EE203: MODERN POWER SYSTEM PROTECTION

Time: 3 Hours **Total Marks: 70**

Instruction: 1. Assume suitable data if necessary.
2. Answer each section separately.

Section - I

Que. – 1

(a) What is the need of protective system. **06**
(b) Describe various zones of protection used in power system. **06**

OR

Que. – 1

(a) Explain various qualities of protection with suitable example. **06**
(b) Discuss how relays are classified in power system. **06**

Que. – 2

(a) Differentiate between primary back-up and secondary back-up relaying scheme. **05**

(b) Explain differential equation based algorithm. **06**

OR

Que. – 2

(a) Explain discrete Fourier transformer technique. **05**
(b) Explain Kalman filtering algorithm used in power system. **06**

Que. – 3

(a) Explain the concept of current transformer and potential transformer. **06**
(b) Explain basic relay terminology used in power system. **06**

Section – II

Que. – 4

(a) Explain directional protection scheme used in power system. **06**
(b) Discuss distance protection scheme used in power system. **06**

OR

Que. – 4

(a) Explain the concept of adaptive relaying used in power system. **06**

(b) Discuss fault location algorithm used in power system. **06**

Que. – 5

(a) Explain Class A, B and C protection scheme used for generator. **06**

(b) Discuss biased differential protection scheme used for transformer. **05**

OR

Que. – 5

(a) Explain comprehensive protection scheme used for AC motors. **06**
(b) Describe bus zone protection scheme. **05**

Que. – 6

(a) Explain the need of auto-reclosing in power system. **06**
(b) Discuss the requirement of synchronizing in power system. **06**

END OF PAPER