

207602

May, 2019

B.Tech. (Electrical Engineering)**6th Semester Examination****POWER SYSTEM PROTECTION (EE-304-C)**

Time : Three Hours]

[Maximum Marks : 75

Note :

1. *It is compulsory to answer all the questions (1.5 marks each) of Section-A in short.*
2. *Answer any four questions from Section-B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

SECTION-A

1. (a) State merits of microprocessor based Relays. (1.5)
(b) What do you understand by current chopping? (1.5)
(c) What do you understand by time current characteristics? (1.5)
(d) What is the meaning of Zones protection? (1.5)
(e) What is meaning of time Grading of relays? (1.5)
(f) What do mean by Pilot Protection? (1.5)
(g) What do mean by rating of Circuit breaker? (1.5)
(h) Mention the criteria of selection of relay. (1.5)

- (i) What do you mean by internal and external fault? (1.5)
- (j) What is the use of CT & PT in protection circuit? (1.5)

7. (a) Describe the following terms: Arc Voltage, Restriking Voltage and Recovery Voltage. (5)
- (b) Describe the construction and working of SF6 circuit breaker. (10)
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SECTION-B

2. (a) Explain different types of amplitude and phase comparators. (10)
- (b) Describe the operating principle, construction features of directional OC relay. (5)
3. What are the various protection schemes of transmission line? Describe the power line carrier current protection scheme. (15)
4. (a) Classify the static relays. Describe in brief the rectifier type relay. (10)
- (b) Describe the distance protection using MHO Relay with blinders. (5)
5. (a) Classify the induction relays. Describe the construction and principle of induction relay. (10)
- (b) Describe the features of directional earth fault relay. (5)
6. What do you understand by primary & back up protection what is the role back up protection? What are the various methods of providing back up protection? (15)