Reg. No. : | | | | | | | | | | |

Question Paper Code: 35305

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

Fifth Semester

Electrical and Electronics Engineering

01UEE505 - PROTECTION AND SWITCHGEAR

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. How faults can be minimized?
2. What are the types of faults?
3. Define the term relay?
4. State R-X diagram.
5. What are the limitations of Buchholz relay?
6. What is the importance of bus bar protection?
7. What is meant by static relay?
8. Point out the need for static comparator.
9. What is meant by electro negativity of SF_6 gas?
10. Write the types of circuit breakers?

PART - B (5 x 16 = 80 Marks)

11. (a) (i) With neat sketch explain primary and back-up protection. What are the various methods of providing back-up protection? (8)

(ii) Explain the disadvantages and applications of solid grounding system. (8)

Or

(b) Discuss and compare the various methods of neutral earthing. (16)

12. (a) Briefly explain the differential relay, negative sequence relay with neat diagram. (16)

Or

(b) Explain the principles of distance relays stating clearly the difference between impedance relay, reactance relay and mho relay. Indicate the difference on R-X diagrams and show where each type is suitable. (16)

13. (a) Explain with a neat diagram the application of Merz price circulating current principle for the protection of the alternator. (16)

Or

(b) Elucidate the principle of pilot-wire relaying schemes for protection of transmission lines. List out its merits and demerits. (16)

14. (a) Explain with neat block diagram of the function of synthesis of mho relay using static phase comparator. (16)

Or

(b) Describe the various functional circuits in a static relay with a help of block diagrams. Explain the function of various blocks. (16)

15. (a) With neat sketch, describe the working principle of an axial air blast type circuit breaker. (16)

Or

(b) With neat sketch, explain the SF6 circuit breakers. (16)
