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

Question Paper Code: 35305

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

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. Discuss the need for protective scheme.
2. Differentiate positive and negative sequence components.
3. Compare static and electromagnetic relay.
4. State R-X diagram.
5. What are the limitations of Buchholz relay?
6. Why the secondary of a Current Transformer should not be open circuited?
7. Define static relay.
8. Mention the advantages of static over current relay.
9. List the demerits of MOCB.
10. Give the significance characteristics of SF_6 gas**.**

PART - B (5 x 16 = 80 Marks)

11. (a) Explain in detail the nature and causes of faults? (16)

Or

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

12. (a) With the neat diagram explain the construction and operation of an induction type directional over current relay. (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) (i) Discuss with a neat electrical diagram the percentage differential relay used for the protection scheme, and explain how the current transformers are connected? (10)

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) With neat sketches, explain the different types of protective schemes for transmission lines. (16)

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

Or

(b) Demonstrate in detail the current chopping and derive re-striking voltage. (16)

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