Reg. No. :

Question Paper Code: 31355

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

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. Show the need for protective schemes in power system.

2. Identify the different types of faults occurring in power system?

3. Define under frequency relay.

4. State R-X diagram.

5. What are the limitations of Buchholz relay?

6. Why bus bar protection is needed?

7. Define static relay.

8. Define the Over Current Protection.

9. What is meant by electro negativity of SF_6 gas?

10. What are the indirect methods of circuit breaker testing?

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 general working of a relay and derive the fundamental torque equation.
(16)

13. (a) Explain the types of protective schemes employed for the protection of transmission line. (16)

Or

(b) Explain in detail the abnormal running condition of generator. (16)

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

Or

(b) Illustrate with neat block diagram of numerical transformer differential protection. (16)

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

Or

(b) What are the different methods of testing of circuit breakers? Discuss their merits and demerits. (16)

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