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Question Paper Code: 59033

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

Elective

Electrical and Electronics Engineering

15UEE925 - ERECTION, TESTING AND COMMISSIONING OF ELECTRICAL
EQUIPMENTS

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 3 = 15 Marks)

1. State the importance of polarity and phase sequence in transformer.
2. Name the various tests performed on power transformer.
3. Mention the significance of line charging capacitance.
4. Illustrating the method of reversing of three phase induction motor.
5. Specify types of protective devices used in electrical systems?

PART - B (5 x 14 = 70 Marks)

6. (a) Describe the functional requirements and constructional features of transformer tanks. (14)

Or

- (b) List the various types of transformers and discuss the basic principle of power transformer working. (14)

7. (a) Explain the construction and working principle of Buchholz relay with its applications. (14)

Or

- (b) Describe the test setup for impulse testing of power transformers. (14)

8. (a) Give the functions of excitation system in synchronous machine. Explain the principle of brushless excitation system. (14)

Or

- (b) Illustrate the procedure of low slip test and the method of calculating X_q in synchronous machine. (14)

9. (a) List the various electrical tests performed on induction machines and discuss any two in detail. (14)

Or

- (b) Describe the mechanical tests for alignment, bearings, vibrations and balancing in induction machine. (14)

10. (a) Describe the procedure of installation of circuit breakers and metal clad switch gears. (14)

Or

- (b) Explain the layout of a simple short circuit testing station for proving the ratings of the circuit breaker. (14)

PART - C (1 x 15 = 15 Marks)

11. (a) Explain the general inspection checks and maintenance of generators and motors. (15)

Or

- (b) Write about hazardous location and the requirements of explosion proof equipment. Give its design specialties. (15)