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**Question Paper Code:59325**

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

Elective

Electrical and Electronics Engineering

15UEE925 - ERECTION, TESTING AND COMMISSIONING OF ELECTRICAL  
EQUIPMENTS

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

PART -- A (5 x 3 = 15 Marks)

1. Explain the use & applications of power transformers. CO1- R
2. State the various tests in commissioning of Power Transformers. CO2- R
3. Explain the voltage ratio test on slip ring Induction motor. CO3- R
4. State the standard test necessary on synchronous motors. CO4- R
5. List the various tests adopted on protective devices CO5 -R

PART – B (5 x14= 70Marks)

6. (a) Describe the construction & parts of a typical distribution Transformer. CO1- U (14)  
Or  
(b) Describe the functional requirements and constructional features of transformer tanks. CO1 -U (14)
7. (a) Explain the construction and working principle of Buchholz relay with its applications. CO2- U (14)  
Or  
(b) Describe the test setup for impulse testing of power transformers. CO2 -U (14)
8. (a) Give the functions of excitation system in synchronous machine. CO3- Ana (14)  
Explain the principle of brushless excitation system  
Or

- (b) Illustrate the procedure of low slip test and the method of calculating  $X_q$  in synchronous machine. CO3- Ana (14)
9. (a) List the various electrical tests performed on induction machines and discuss any two in detail. CO4 -U (14)
- Or
- (b) (i) Summarize the mechanical designed features of IM. CO4 -Ana (7)
- (ii) Summarize the starting methods of squirrel cage IM CO4 -Ana (7)
10. (a) (i) State the various type tests performed on high voltage a.c circuit CO5 -U (7)
- (ii) Explain routine tests necessary on high voltage a.c circuit breaker. CO5- U (7)
- Or
- (b) What are the types of Circuit breakers? Explain any one circuit breaker with neat sketch. CO5- U (14)

PART -- C (1x 15 = 15 Marks)

11. (a) Describe the operations of over current relay & time delay relay with neat sketches CO5- U (15)
- Or
- (b) Explain the general inspection checks and maintenance of generators and motors CO1 -App (15)