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

Question Paper Code:59325

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

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.	List the various types of 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.	Illustrating the method of reversing of three phase induction motor.		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)	Explain the important steps followed in inspection of transformers.	CO1 -U	(14)
7.	(a)	State the importance of efficiency and significance of condition of maximum efficiency of transformer & Analyse the efficiency by on the basis of O.C test & S.C test	CO2- U	(14)
		Or		
	(b)	Describe the test setup for impulse testing of power transformers.	CO2 -U	(14)
8.	(a)	Explain the sudden 3 phase short circuit test on a 3 phase synchronous generators & also explain how to calculate X_d',X_d'',X_d or Xs.	CO3- Ana	(14)
		Or		

	(b)	Illustrate the procedure of low slip test and the method of calculating X_q in synchronous machine.	CO3- Ana	(14)
9.	(a)	Describe the mechanical tests for alignment, bearings, vibrations and balancing in induction machine.	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)	Explain the layout of a simple short circuit testing station for proving the ratings of the circuit breaker	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 functional requirements & constructional features of transformer tanks	CO1 -App	(15)