

(Elective- A)

Discipline: Electrical Engineering				Name of the Faculty: Er. Sitanjali Mardi	
Course Code:	TH- 4	Semester:	4th		
Total Periods:	75	Examination:	Summer 2023-24		
Theory Periods:	5P/W	Class Test:	20		
Maximum Marks:	100	End Semester Examination:	80		


Week	NO OF PERIODS AVAILABLE	Class Day	Theory Topics to be covered	Remarks
1st	5	16.1.24(2 CLASSES)	INTRODUCTION/BRIEFING, Chapter-1: Installation, Commissioning and Testing of Machine 1.1 Inspection of arrival of machine	
		17..1.24	Chapter-1: Installation, Commissioning and Testing of Machine 1.1 Inspection of arrival of machine 1.1 inspection procedure before its installation	
		19.1.24	1.2 Generalized procedure of installation of Electrical machines 1.3 Electric wiring for motors and switch gears	
		22.1.24	1.4 General requirement for Electric Installation according to Indian Electricity rules	
		29.1.24	.5 Necessity of starters and relays for both DC and AC machines	
2nd	5	30..1.24(2 class)	1.5 Necessity of starters and relays for both DC and AC machines 1	

		31.1.24	1.6 Testing before giving supply and testing report	
		2.2.24	1.6 Testing before giving supply and testing report	
		5.2.24	1.6 Testing before giving supply and testing report	
3rd	5	6.2.24(2 classes)	Revision class Chapter 2-Installation, Commissioning and Testing of Transformer. 2. 1 Basic idea on dispatch, inspection, storage and handling of transformer	
		7.2.24	Chapter 2-Installation, Commissioning and Testing of Transformer. 2. 1 Basic idea on dispatch, inspection, storage and handling of transformer.	
		9.2.24	2. 2 Civil construction feature regarding connection like ventilation, noise level,	
		12.2.24	2. 3 Foundation and drainage of oil.	
4TH	5	13.02.24(2 classes)	2.4 Cabling and cable box for transformer 2. 5 Provision for fire protection.	
		16.2.24	2. 5 Provision for fire protection	
		19.2.24	2. 6 Provision for bushing support location of switch gear	
		20.02.24(2 classes)	2. 7 Steps for commissioning fitting of all accessories 2. 8 Filling of oil, drying out	
5th	5	21.02.24	2. 9 Charging the breather with fresh silica gel.	
		23.02.24	2. 10 Cleaning of bushing, fixing of conductor & cables, earthing of tank and cover, neutral earthing.	

			CLASS TEST 1		
		26.02.24			
		27.02.24(2 CLASS)	2. 10 Cleaning of bushing, fixing of conductor & cables, earthing of tank and cover, neutral earthing. 2. 11 Fixing of protection circuits and setting of relays		
4 th		28.02.24	REVISION		
		1.03.24	Chapter-3:Installation, Commissioning & Testing of Sub-station 3. 1 Design and planning of indoor substation		
		4.03.24	3.2 General requirement of layout of indoor substation with key diagram		
		06.03.24	3.3 Consideration of safe operation of substation		
7 th		11.03.24	3. 4 Installation of outdoor substation: 3.4.1 Selection of site, transport & receipt of transformer, checking of insulation resistance of the winding, testing of transformer oil, protection fittings, construction of mounting, earthing arrangement and final commissioning.		
	5	12.03.24(2 classes)	3.4.1 Selection of site, transport & receipt of transformer, checking of insulation resistance of the winding, testing of transformer oil, protection fittings, construction of mounting, earthing arrangement and final commissioning. 3.5.1 Installation of control and relay panels		
		13.3.24			
8 th	5	15.3.24	3.5.2 Preliminary preparation.		

9th	4	18.3.24	3.5.3 Sequence card for erection of switch gear equipments	
		19.3.24(2 classes)	3.5.4 Location of place 3.5.5 Unpacking	
		20.3.24	3.5.6 Foundation 3.5.7 Erection 3.5.8 Relays	
		22.3.24	3.6 Bus-bar earthing connection, Earthing 3.6.1 Connection to main cable.	
		27.03.24	3.6.2 Safety precaution	
10th	5	02.04.24	3.7 Installation of outdoor circuit breaker: 3.7.1. Receipt and storage.	
		03.4.24	3.7.2 Civil works. 3.7.3 Various steps for install 3.8 Pre-commissioning tests lation	
		5.4.24	INTERNAL ASSESSMENT	
		8.4.24(2 CLASSES)	REVISION	
		9.4.24	Chapter-4 Maintenance: 4.1 Fundamental of maintenance	
11th	5	10.4.24	4.2 Preventive maintenance and planning. [Daily, Weekly, Monthly, Half-yearly and Yearly maintenance.]	
		12.4.24	4.3 Preventive maintenance and planning. [Daily, Weekly, Monthly, Half-yearly and Yearly maintenance.]	
		15.4.24(2 CLASSES)	3 Advantages of Preventive maintenance	

		16.4.24	CLASS TEST-2	
		19.4.24	4.4 Breakdown maintenance: List of tools / instruments and materials used for maintenance.	
		22.4.24(2 CLASSES	4.5 Making or Preparing Maintenance schedule of DC machines, Induction machines, Synchronous machines, Transformer, Transmission line, Distribution lines, Underground cables, Circuit breakers, Switch gear and protective relays and substations, SF-6 circuit breakers, Batteries in substation.	
12th	5	23.4.24	4.5 Making or Preparing Maintenance schedule of DC machines, Induction machines, Synchronous machines, Transformer, Transmission line, Distribution lines, Underground cables, Circuit breakers, Switch gear and protective relays and substations, SF-6 circuit breakers, Batteries in substation.	
		24.4.24	REVISION/ PYQS Discussion	
		, 26.4.24	VST	
13th	1			
	Total class 59/75			


 19/4/2024
 HOD (Electrical)
 H.O.D.,
 Orissa School of Mining
 Keonjhar


 19-4-24
 PRINCIPAL