LESSON PLAN-4th SEMESTER (2021)				
SUBJECT:Material Testing				
NAME OF THE FACULTY: SOURAV ADHYA				
MONTH	MODULE/UNIT	COURSE TO BE COVERED	CLASSES REQUIRED	REMARKS
April	1	**Hardness Test**	10	
		Explain and Derive expressions for Brinell,vickers and Rockwell Hardness test	3	
		Discuss rebound hardness with reference to shore's Scleroscope	3	
		Describe scratch hardness and explain mho's scale.	2	
		Discuss the imperical relationship of hardness with strength	2	
May	2	**Tensile Test**	10	
		Draw and explain stress-strain curve	1	
		Explain modulus of elasticity, proof stress	1	
		Discuss with sketch about yield point phenomenon.	1	
		Explain true stress and true strain curve.	1	
		Define ductility and toughness	1	
		Required properties of coke for making iron	2	
		Flux and its types	1	
		Evaluation of Flux (available base & basicity)	2	
	3	**Impact Test**	6	
		Define impact strength	2	
		Discuss about Charpy and Izod impact tests	2	
		Discuss about transition temperature and ductility, brittle fracture	2	
June	4	**Fatigue Test**	8	
		Explain different stress cycles	2	
		Describe S.N curve and endurance limit	2	
		Explain the procedure of fatigue testing and fatigue testing machine	2	
		Mention different metallurgical factors that affect fatigue behavior	2	
	5	**Creep Test**	6	
		Define creep and its importance	1	
		Discuss engineering creep curve,constant	1	
		Explain equicohesive temperature	1	
		State various factors that affect creep	1	
		Describe creep testing machine	1	
		Describe stress rupture test	1	
July	6	**Non Destructive Testing**	14	
		Give brief description of the following NDT	2	
		Visual testing ,Leakage test	6	

		Magnetic particle testing , Dye penetration test	4	
		Acoustic methods and ultrasonic testing Eddy current testing X – ray diffraction	2	
	7	**Temparature Measurement and Calibration**	6	
		Analysis the basic principle of pyrometry	3	
		Explain different types of pyrometer and thermocouples.	3	