

Lesson Plan

Name of the Faculty : Sh. Subhash Chander

Discipline : Mechanical Engineering

Semester : 4th

Subject : **INDUSTRIAL ENGINEERING**

Lesson Plan duration : 15 weeks (from 22nd March, 2021 to 2nd July, 2021)

Work load per week : Lecture – 03, Practical – 00

Week	Theory	
	Lecture Day	Topic (Including assessment/test)
1 st	1 st	1. Productivity: Introduction to productivity, Factors affecting productivity,
	2 nd	Practical Measurement of productivity, Difference between production and productivity,
	3 rd	Causes of low productivity and Methods to improve productivity
2 nd	4 th	Contribution of standardization in improving productivity
	5 th	2. Work Study: Definition and scope of work study,
	6 th	Factors for selection of work study job,
3 rd	7 th	Uses and limitations of work study, Inter-relation between method study and work measurement
	8 th	Human aspects of work study
	9 th	Role of work study in improving productivity.
4 th	10 th	3. Method Study: Definition, Objectives,
	11 th	Procedure for method study analysis,
	12 th	Information collection & recording techniques through various diagrams
5 th	13 th	Information collection & recording techniques through various diagrams

	14 th	4. Motion Analysis: Principles of Motion analysis: Therbligs and SIMO charts
	15 th	Normal work area (Principle of motion economy), design and arrangement of various work place
6 th	16 th	1st sessional test (Tentative)
	17 th	Assessment
	18 th	Ergonomics , Design of tools and equipments
7 th	19 th	5. Work Measurement: Objectives, work measurement techniques,
	20 th	Stop watch time study- Principle, equipment used and procedure,
	21 st	Systems of performance rating, Standard elements of time,
8 th	22 nd	Calculation of basic time, Various allowances,
	23 rd	Guide for rest allowance in Indian conditions
	24 th	Work sampling, Standard data and its usage
9 th	25 th	6. Wages and Incentive Schemes: Introduction to wages
	26 th	Wage payment for direct and indirect labour
	27 th	Wage payment plans and incentives, Various incentive plans,
10 th	28 th	Incentives for indirect labour.
	29 th	2nd sessional test (Tentative)
	30 th	Assessment
11 th	31 st	7. Production Planning and Control: Production and its types- job order, batch type and continuous type of productions.
	32 nd	Objectives & components (functions) of P.P.C, Advantages of production planning and Production Control
	33 rd	Stages of P.P.C, Process planning, Routing, Scheduling, Dispatching and follow up,
12 th	34 th	Routing - purpose, Route sheets, Scheduling – purpose, Machine loading chart,
	35 th	Dispatching – purpose and procedure, Follow up – purpose and procedure,
	36 th	Structure and function of production planning department, Gantt chart
13 th	37 th	CPM/PERT techniques, Drawing of simple networks and critical time calculation.
	38 th	Production Control in job order, Batch type and continuous type of productions. Difference between these controls.

	39 th	8. Stores Management: Different layout and structures of stores, Inventory control, Calculation of EOQ,
14 th	40 th	Bin cards and various forms required in stores for documentation, Purchase procedure
	41 st	3rd sessional test (Tentative)
	42 nd	Assessment
15 th	43 rd	Revision
	44 th	Revision
	45 th	Revision