

LESSON PLAN

Name of Faculty: Mr. Sandeep Singh
Discipline: Mechanical Engg.
Semester: 6th
Subject: EDM
Lesson Plan Duration: 16 weeks (from Jan, 2018 to April 2018)
Work load (Lecture /Practical) per week (in hours): Lectures—03, Practical—00

Week	Theory		Practical	
	Lecture Day	Topic (Including Assignment/ Test	Practical Day	Topic
1 st	1	Concept /Meaning and Its need	1	
	2	Qualities and Functions of an entrepreneur and Barriers in entrepreneurship		
	3	Sole proprietorship and Partnership forms of business organizations		
2 nd	4	Scheme of assistance by entrepreneurial Support agencies at National State, District Level	2	
	5	Organization: NSIC, NRDC, DC		
	6	MSME, SIDBI, NABARD		
3 rd	7	Commercial Banks,	3	
	8	SFC's, TCO,		
	9	KVIB		
4 th	10	DIC , Technology business incubators	4	
	11	Science and technology entrepreneur parks		
	12	Scanning of the business environment		
5 th	13	Salient features of National & State Indus. Policies	5	
	14	Resultant business opportunities		
	15	Types and Conduct of market survey		
6 th	16	Assessment of demand	6	
	17	Supply in potential area of growth		
	18	Identifying business opportunity		
7 th	19	-do-	7	

	20	Considerations in product selection		
	21	-do-		
8 th	22	Preliminary project report	8	
	23	-do-		
	24	Detailed project report including technical		
9 th	25	Economic and market feasibility	9	
	26	Common errors in project report preparations		
	27	-do-		
10 th	28	Exercises on preparation of project report	10	
	29	-do-		
	30	Definitions and importance of management		
11 th	31	Functions of management: Importance and process of planning, organizing, staffing, directing and controlling	11	
	32	Principles of management, Concept and structure of an organization		
	33	Types of industrial organizations: Line Organization, Line and staff organization and Functional organization		
12 th	34	Definition and Need Qualities and functions of a leader	12	
	35	Manager Vs leader, Types of leadership		
	36	Motivation : Definitions and characteristics, Factors affecting motivation, Theories of motivation (Maslow, Herzberg, Douglas, McGregor)		
13 th	37	Management Scope in Different Areas Human Resource Management, Introduction and objective, Introduction to Man power planning, recruitment and selection	13	
	38	Introduction to performance appraisal methods		
	39	Material and Store Management, Introduction functions, and objectives, ABC Analysis and EOQ		
14 th	40	Marketing and sales, Introduction, importance, and its functions, Physical distribution	14	
	41	Introduction to promotion mix Sales promotion		
	42	Financial Management, Introductions, importance and its functions, Elementary knowledge of income tax, sales tax, excise duty, custom duty and VAT		

15 th	43	Customer Relation Management (CRM) Definition and need Types of CRM	15	
	44	Total Quality Management (TQM) Statistical process control Total employees Involvement Just in time (JIT)		
	45	Intellectual Property Right (IPR) Introductions, definition and its importance Infringement related to patents, copy right, trade mark		

LESSON PLAN

Name of Faculty : Mr. Bhupender, lecturer
Discipline : Mechanical Engg.
Semester : 6th
Subject : Industrial Engg.
Lesson Plan Duration : 15 weeks (from 9th Jan, 2018 to April 2018)
Work load (Lecture /Practical) per week (in hours): Lectures—04, Practical—00

Week	Lecture Day	Theory	Practical	
		Topic (Including Assignment/ Test)	Practical Day	Topic
1 st	1	Chapter-1 : Productivity Introduction to productivity, Factors affecting productivity	N/A	N/A
	2	Measurement of productivity		
	3	Causes of low productivity		
	4	Methods to improve productivity, Assignment No. 1 of chapter -1		
2 nd	5	Chapter-2 : Work Study Definition and scope of work study	N/A	N/A
	6	Inter-relation between method study and work measurement		
	7	Inter-relation between method study and work measurement		
	8	Human aspects of work study		
3 rd	9	Human aspects of work study	N/A	N/A
	10	Role of work study in improving productivity		
	11	Role of work study in improving productivity, Assignment No. 2 of chapter -2		
	12	Chapter-3 : Method Study Objectives and procedure for Method analysis		
4 th	13	Procedure for Method analysis	N/A	N/A
	14	Information collection and recording techniques		
	15	Information collection and recording techniques		
	16	Information collection and recording techniques, Assignment No. 3 of chapter -3		
5 th	17	Evaluation of Assignment No-1, 2 & 3 & Viva-Voce	N/A	N/A
	18	Evaluation of Assignment No-1, 2 & 3 & Viva-Voce		
	19	Sessional Test-1(To be adjusted as per HSBTE schedule		
	20	Distribution & Review of Sessional Test-1		
6 th	21	Chapter-4 : Motion Analysis Principles of Motion analysis	N/A	N/A
	22	Therbligs		
	23	SIMO charts		
	24	Normal work area and design of work places		
7 th	25	Ergonomics , Assignment No. 4 of chapter -4	N/A	N/A
	26	Chapter-5 : Work Measurement Objectives of work measurement, work measurement techniques		
	27	Work measurement techniques		
	28	Stop watch time study, principle equipment used and procedure, Calculation of basic times		

8 th	29	Systems of performance rating	N/A	N/A
	30	Various allowances, Calculation of standard time		
	31	Work sampling		
	32	Standard data and its usage, Assignment No. 5 of chapter -5		
9 th	33	Chapter-6 :Wages & Incentive Scheme Introduction to wages, wages payment for direct and indirect labour	N/A	N/A
	34	Wage payment plans and incentives		
	35	Various incentive plans		
	36	Incentives for indirect labour, Assignment No.6 of chapter -6		
10 th	37	Evaluation of Assignment No-4, 5 , 6 & Viva-Voce	N/A	N/A
	38	Evaluation of Assignment No-4, 5 , 6 & Viva-Voce		
	39	Sessional Test-2 (To be adjusted as per HSBTE schedule		
	40	Distribution & Review of Sessional Test-2		
11 th	41	Chapter-7 : Production Planning & Control Introduction, objectives, Advantages and components (functions) or Stages of P.P.C	N/A	N/A
	42	Process planning, routing, routing purpose, route sheets		
	43	Scheduling – purpose, machine loading chart, Gantt chart		
	44	Dispatching – purpose, and procedure, Follow up – purpose and procedure		
12 th	45	CPM/PERT technique	N/A	N/A
	46	Drawing of simple networks and critical time calculation.		
	47	Production Control in job order, batch type and continuous type of productions. Difference between these controls. Assignment No.7 of chapter -7		
	48	Chapter-8 : Estimating and Costing Introduction, purpose/functions of estimating		
13 th	49	Costing concept, ladder and elements of cost, difference between estimation and costing	N/A	N/A
	50	Overheads and their types		
	51	Estimation of material cost and numerical problems		
	52	Estimation of material cost and numerical problems		
14 th	53	Estimation of cost for machining processes and numerical problems	N/A	N/A
	54	Estimation of cost for machining processes and numerical problems Assignment No.8 of chapter -8		
	55	Revision		
	56	Revision		
15 th	57	Evaluation of Assignment No-7, 8 & Viva-Voce	N/A	N/A
	58	Evaluation of Assignment No-7, 8 & Viva-Voce		
	59	Sessional Test-3(To be adjusted as per HSBTE schedule		
	60	Distribution & Review of Sessional Test-3		

LESSON PLAN

Name of Faculty: Mr. Bhupender
Discipline: Mechanical Engg.
Semester: 6th
Subject: EDM
Lesson Plan Duration: 16 weeks (from Jan, 2018 to April 2018)
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	Lecture Day	Topic (Including Assignment/ Test	Practical Day	Topic
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LESSON PLAN

Name of Faculty : Yet To Be Assigned
 Discipline : Mechanical Engineering
 Semester : IV
 Subject : Inspection & Quality Control
 Lesson Plan Duration : 15 Weeks (9 January onwards)

Week	Theory		Practical Day	
	Lecture Day	Topic (Including assignment/test)	Practical Day	Topic
I	1	Introduction, units of measurement	1	Use of dial indicator for measuring taper
	2	standards for measurement and interchangeability.		
	3	International, national and company standard		
	4	line and wavelength standards.		
II	5	Planning of inspection: what to inspect? When to inspect?	2	Use of combination set for measuring taper
	6	Who should inspect? Where to inspect?		
	7	Types of inspection: remedial, preventive and operative inspection, incoming, in-process and final inspection		
	8	Study of factors influencing the quality of manufacture		
III	9	Basic principles used in measurement and gauging	3	Use of bevel protector for measuring taper.
	10	Mechanical, optical, electrical and electronic		
	11	Study of various measuring instruments like: calipers, micrometers		
	12	Dial indicators, surface plate and straight edge		
IV	13	Protectors, sine bar, clinometer	4	Use of sine bar for measuring taper
	14	Working and construction of comparators – mechanical		
	15	Working and construction of electrical and pneumatic		
	16	Slip gauges, tool room microscope		
V	17	Working and construction of profile projector	5	Measurement of thread characteristic using vernier.
	18	Limit gauges: plug, ring, snap, taper, thread, height, depth, form, feeler, wire and their applications for linear,		
	19	Angular, surface, thread and gear measurements, gauge tolerances		
	20	Revision upto L-18		
VI	21	Geometrical parameters and errors: Errors & their effect on quality, concept of errors	6	Measurement of thread characteristic using gauges
	22	Measurement of geometrical parameter such as straightness		
	23	Measurement of geometrical parameter such as flatness and parallelism		
	24	Study of procedure for alignment tests on lathes		

VII	25	Study of procedure for alignment tests on drilling	7	Use of slip gauge in measurement of center distance between two pins
	26	Study of procedure for alignment tests on milling machines.		
	27	Testing and maintenance of measuring instruments.		
	28	Basic statistical concepts, empirical distribution and histograms		
VIII	29	Frequency, mean, mode, standard deviation	8	Use of tool maker's microscope.
	30	Normal distribution, binomial and Poisson, Simple- examples		
	31	Introduction to control charts		
	32	X -Chart and its application,		
IX	33	R -Chart and its application,	9	Use of comparator.
	34	P charts and its applications		
	35	C- charts and its applications		
	36	Comparision of X, R, P and C chart		
X	37	Assignment -I on Charts	10	Plot frequency distribution for 50 turned components
	38	Sampling plans		
	39	Selection of sample size		
	40	Method of taking samples		
XI	41	Frequency of samples	11	Plot frequency distribution for 50 turned components
	42	Some Numerical problems on Sampling		
	43	Inspection plan format		
	44	Inspection test reports		
XII	45	Queries related to Sampling	12	With the help of given data, plot X and R charts
	46	Concept of total quality management (TQM)		
	47	Continune ...Concept of total quality management (TQM)		
	48	National and International Codes.		
XIII	49	ISO-9000, concept	13	With the help of given data, plot p and C charts
	50	ISO-9000, evolution & applications		
	51	QC tools		
	52	QC tools		
XIV	53	Introduction to Kaizen	14	To complete backlog (if Any)
	54	Introduction to 5S and its implimentation		
	55	Introduction to Instrumentation and principal of Transducer		
	56	Measurement of mechanical Quanties Displacement, pressure, Vibration frequency by Resistance Type Transducer		
XV	57	Measurement of mechanical Quanties Displacement, pressure, Vibration frequency by Capacitance Type Transducer	15	Viva-Voce
	58	Measurement of mechanical Quanties Displacement, pressure, Vibration frequency by Induction Type Transducer		
	59	Revision of Chapter -5		
	60	Checking of Class work & Assignments		

Name of Faculty : Yet To Be Assigned
 Discipline : Mechanical Engineering
 Semester : 6th
 Subject : Automobile Engineering
 Lesson Plan Duration : 15 weeks (From January ,2018 to April,2018)

Work Load (Lecture /Practical) per week in hours : Lecture 4 Practical -2

Week	Theory		Practical	
	Lecture Day	Topic (Including assignment/test)	Practical Day	Topic
1 st	1 st	Automobile and its development	1	Fault and their remedies in (i) Battery Ignition system
	2 nd	Various types of automobiles manufactured in India.		
	3 rd	Layout of chassis		
	4 th	Revision		
2 nd	1 st	Fuel systems for petrol and diesel engines including multi point fuel injection (MPFI), common rail direct injection (CRDI)	1	Fault and their remedies in (ii) magnetic Ignition system.
	2 nd	Fuel injectors and nozzles.		
	3 rd	Comparison of MPFI with carburetor system.		
	4 th	Concept of double overhead cam		
3 rd	1 st	Single overhead cam, Twin cam 16	2	Demonstration of (i) Head Light Model (ii) Wiper and Indicators.
	2 nd	Valve technology in 4 cylinder engine		
	3 rd	Transmission System Clutch - Function, Constructional details of single plate and multiplate friction clutches,		
	4 th	Centrifugal and semi centrifugal clutch, Hydraulic clutch		

4 th	1 st	Gear Box - Function, Concept of sliding mesh, constant mesh and synchromesh gear box	3	Demonstration of (i) AC Pump (ii) SU Pump (iii) Master Cylinders.
	2 nd	Torque converter and overdrive		
	3 rd	Types of drives – Front wheel, Rear wheel, Four Wheel.		
	4 th	Function of Propeller shaft, Universal joint		
5 th	1 st	Differential and Different	4	Demonstration of (i) rear axle (ii) differential (iii) steering system.
	2 nd	Types of Rear axles and Front Axles.		
	3 rd	Wheels and Tyres - Types of wheels,		
	4 th			
6 th	1 st	Types and specifications of tyres used in Indian vehicles	5	Fault finding practices on an automobile - four wheelers (petrol/ diesel vehicles).
	2 nd	Wheel balancing		
	3 rd	Steering System Different types		
	4 th	Function and principle of Ackerman		
7 th	1 st	Davis steering mechanism	6	Tuning of an automobile engine.
	2 nd	Types of steering gear boxes		
	3 rd	Revision		
	4 th	Worm and nut, worm and wheel, worm and roller		
8 th	1 st	Rack and opinion, Power steering system and alignment of wheels	7	Driving practice on a 4-wheeler.
	2 nd	Caster, kingpin inclination.		
	3 rd	Braking system Different types		
	4 th	Revision		

9 th	1 st	Constructional details of mechanical brake	8	Charging of an automobile battery and measuring cell voltage and specific gravity of electrolyte.
	2 nd	Working of mechanical brake system		
	3 rd	Hydraulic brake		

	4 th	Concept of air and vacuum brake		
10 th	1 st	Brake adjustment	9	Changing of wheels and inflation of tyres, balancing of wheels.
	2 nd	Anti Lock brake system and its working.		
	3 rd			
	4 th	Revision		
11 th	1 st	Suspension System		
	2 nd	Function coil spring,		
	3 rd	Working of coil spring		
	4 th	Types of coil spring		
12 th	1 st	Leaf spring.	10	Checking spark gap and valve clearance
	2 nd	Revision		
	3 rd	Concept of Air suspension and Shock absorber.		
	4 th			
13 th	1 st	Auto Electrical System: Constructional details of lead acid cell battery	11	Cleaning and adjusting a carburetor.
	2 nd	Maintenance of batteries		
	3 rd	Checking of batteries for voltage and specific gravity		
	4 th	Magnato and Battery coil ignition system.		
14 th	1 st	Concept of Dynamo		
	2 nd	Alternator - Construction and working		
	3 rd	Charging of battery by Alternator and Regulator		
	4 th	Revision		
15 th	1 st	Revision		
	2 nd	Revision		
	3 rd	Revision		
	4 th	Revision		

(Signature of the teacher concerned with date)