Peacock

Regn Tm: 2607298

LESSON PLAN REGISTER

DEPARTMENT OF MECHANICAL ENGG.

BDSE, BRAJRAJNAGAR

SEMESTER: 5TH SEMESTER/6th SEMESTER onwards

SESSION-2018-19

NAME OF FACULTY: B. Mishra

year - 2020-21 (W)
5th semester.

Discipline: Mechanical | Semester - 5th | Name of the teaching Faculty: Byomakesh Mishra

Subject: Design of Machine elements | No. of days per Week - (4) | Commencement of semester - 01.9.2020 | End of Semester 30-3-21

Total No of Weeks -

Week	Day	
	Mon	Introduction to Machine design.
	Wed	classification of machine design.
1st	Fri	Engineering materials.
	sat	Mechanical and Physical properties of.
	MON	Stress, strain, stress-strain Curve.
	WED	Working stress, Ultimate stress, Yield stress
2nd		Factor of Safety
	FRI	stress Concentration.
	SAT	Modes of failure
	MON	Governing factors for machine design
3rd	WED	Cont.
	FRI	Design Procedure.
	SAT	

	MON	Fastners, Fastening processes.
	WED	classification of Joints
4th	FRI	Definition of Welding, Types of welded Joints
	SAT	Advantages of welded joints.
	MON	strength of welded joints. (Transverse and Parallel fillet, circular fillet)
	WED	Design of welded joints for eccentric Loads.
5th	FRI	cont.
	SAT	Numerical problems on welded joints.
	MON	Numerical problems on welded joints.
	WED	Riveted Joints, Types of riveted joints.
6th	FRI	classification of riveted Joints.
	SAT	Failure of riveted joints
	MON	strength of riveted joints, Efficiency
7th	WED	Design of riveted joints for pressure vessel Assumptions, procedure.
	FRI	Numerical problems.

	MON	Shaft, definition, function.
8th	WED	Materials of shaft
	FRI	Standard size of shafts.
	SAT	Design of shaft on strength basis Solid and hollow shafts. Pure torsion
	MON	Design of shafts on rigidity basis.
	WED	stresses produced.
9th		
	FRI	Numerical Problems. (Torsion only)
	SAT	Numerical problems on (bending + twisting)
	MON	Numerical Problems on rigidity basis.
10th	WED	Cont. - - -
	FRI	Key, Definition, Function, materials.
	SAT	Types of keys, Failure of key
	MON	Effect of key-ways
	WED	Specification of parallel key, gib-head key
11th		tapper key
	FRI	Failure of keys,
	SAT	Numerical Problems. Cont. - -
	MON	Cont. - -
	WED	Coupling, Definition, function.
12th		
	FRI	Design of shaft Coupling.
	SAT	Requirements of good Coupling

	MON	Types of Coupling
	WED	Design of sleeve Coupling
13th	FRI	Design of Compression Coupling.
	SAT	Numerical Problems
	MON	Cont. -
14th	WED	Design of Spring: Definition, function.
	FRI	Spring materials, Types of Springs.
	SAT	Standard size of Spring wire
	MON	Terms used in helical Compression Spring
	WED	Stresses induced, Curvature effect, Deflection
15th		Spring index. - - -
	FRI	Surge in Spring
	SAT	Numerical Problems.
	MON	
	WED	
16th		
	FRI	
	SAT	
	MON	
	Wed.	
17th		
	FRI	
	SAT	

30/3/21

year 2020-21 (S)
6th Semester.

Discipline - Mechanical - Semester - 6th
Name of the teaching faculty - Byomakesh Mishra

Subject - Advance Manufacturing Processes
No of days per week - 4
Commencement of Semester - 20/1/21
End of Semester - 31/5/21

Week	Day	
1st	MON	Introduction to Advanced Manufacturing Processes.
	WED	Traditional and untraditional Processes
	FRI	Modern Machening process and their classification
	SAT	Cont- - .
2nd	MON	Ultrasonic Machening, Principle, Equipments
	WED	Ultrasonic Machening, Adv, disadvantage, App.
	FRI	EDM, Working Principle, Equipments, dielectrics-
	SAT	EDM Adv. Disadv. parameters, Application.
	MON	Wire EDM, Equipments. Principles - - - .
		controlling parameters, applications.
3rd	WED	AJM, Principle, Equipments, MRR
	FRI	AJM Advantage, Disadv. application.
	SAT	LBM, Principle, Equipments, Parameters.
	MON	LBM, Adv. disadv. application.
4th	WED	ECM, Working Principles, Equipments
	FRI	Process parameters, MRR, Applications
	SAT	PAM, Principles, description of Equipments

	MON	PAM :- MRR, Process parameters Cont - .
	WED	Performance characterization, Application.
5th	FRI	EBM :- Working Principle, Equipments
	SAT	MRR, Process parameters.
	MON	EBM : Performance Characterization; Applications.
	WED	Introduction to Plastic Processing,
6th	FRI	Moulding Processes: Injection moulding
	SAT	compression moulding -
	MON	Transfer moulding . .
7th	WED	Introduction to Extruding
	FRI	casting of process of Plastics
	SAT	calendering process for Plastic.
	MON	Fabricating Processes, sheet making
8th	WED	Blow moulding & manufacturing of rods, tubes - - -
	FRI	Reinforcing. Application of Plastics
	SAT	Introduction to additive manufacturing processes, need - - .
	MON	Fundamentals of additive manufacturing - - -
	WED	Additive manufacturing process Chain.
9th	FRI	Advantage of additive manufacturing - - - Limitations of AM.
	SAT	classification of AM Process.

MON Automated Processes, CNC Process

WED Difference between AM and CNC.

10th

FRI Applications of AM: (Aerospace engineering

SAT Automotive industries, Jwelery industry, Arts--
R.P. medical, Biotech engineering.

MON Web based Rapid Prototyping Systems

11th WED Flexible manufacturing Processes

FRI Concurrent Engineering, Production tools

SAT Capstan and Turret Lathes.

MON Concept of SPM

WED General elements of SPM

12th

FRI Productivity improved by SPM.

SAT Cont---

MON Principles of SPM design

Wed Cont---

13th FRI Maintenance of Machine tools introduction.

SAT Types of maintenance, Explanation.
(Preu, Corrective, Planned, Predective)

MON Cont---

wed Repair cycle Analysis.

14th

FRI Repair Complexity

SAT Maintenance manual, Record.

MON Housekeeping.

WED Introduction to Total productive
Maintenance (TPM).

15th

FRI Cont...

SAT

Revised
03/9/21

16th

17th

19th