LESSON PLAN SUMMER-2022

Name of Faculty: Rupa Bhengraj Sub.- Advance Manufacturing Process (6TH) Branch- Mech. Engg.

SEMESTER-(FROM -1.10.2022 TO-30.01.2022) No. OF WEEKS = 15

SL NO	Week	No. of Days/Week Class alloted: 4	CHAPTER	TOPIC NAME	NO OF PERIODS
1	1st	1st	Module-01	Introduction to uncoventional machning & comparison with traditional machining process	1
2		2nd		Ultrasonic Machining: Working principle, Description of equipment, applications.	1
3		3rd		Advantage,limitations & applications of Ultrasonic Machining	1
4		4th		Electric Discharge Machining: Working principle, Description of equipment, Dielectric fluid, tools (electrodes),	1
5	2nd	1st		Process parameters, Output characteristics, applications.	1
6		2nd		Wire cut EDM: Principle, Description of equipment,	1
7		3rd		Controlling parameters,advantage,limitations applications.	1
8		4th		Abrasive Jet Machining:Working principle, description of equipment,	1
9	3rd	1st		Material removal rate, application.	1
10		2nd		Laser Beam Machining: Working principle, description of equipment,	1
11		3rd		Material removal rate,Advantage,limitations & application.	1
12		4th		Electro Chemical Machining: Working principle, description of equipment,	1
13	4th	1st		Material removal rate,Advantage,limitations & application.	1
14		2nd		Plasma Arc Machining – Working principle, description of equipment,	1
15		3rd		Material removal rate, Process parameters,	1
16		4th		Performance characterization,Advantage,limitations & Applications.	1
17	5th	1st		Electron Beam Machining - Working principle, description of equipment,	1
18		2nd		Material removal rate, Process parameters,	1
19		3rd		Performance characterization, Advantage,limitations &Applications.	1
20		4th		Class Test	1
21	6th	1st	Module-02	Introduction to Processing of plastics.	1
22		2nd		Moulding processes: Injection moulding, ,	1
23		3rd		Compression moulding	1
24		4th		Transfer moulding.	1
25	7th	1st		Extruding process- Casting	1
26		2nd		Calendering	1
27		3rd		Fabrication methods-Sheet forming,Blow moulding	1
28		4th		Laminating plastics (sheets, rods & tubes), Reinforcing.	1
29	8th	1st		Reinforcing	1
30		2nd		Applications of Plastics.	1
31		3rd	Module-03	Introduction to Additive Manufacturing	1
32		4th		Need of Additive Manufacturing	1
33	9th	1st		Fundamentals of Additive Manufacturing, AM Process Chain	1
34		2nd		AM Process Chain	1
35		3rd		Advantages and Limitations of AM	1
36		4th		Classification of AM process	1
37	10th	1st		Fundamental Automated Processes	1
38		2nd		Distinction between AM and CNC	1
39		3rd		Application of AM in Design,Aerospace Industry	1
40		4th		Application of AM inAutomotive Industry, JewelryIndustry, Arts and Architecture	1
41	11th	1st		Application of AM in RP Medical and Bioengineering	1
42		2nd		Web Based Rapid Prototyping Systems	1
43		3rd		Concept of Flexible manufacturing process,	1
44		4th		Concurrent engineering,	1
45	12th	1st		Production tools like capstan and turret lathes using rapid prototyping processes.	1
46		2nd	Module-04	Introduction to SPM	1
47		3rd		Concept of SPM,	1
48		4th		General elements of SPM,	1
49	13th	1st		Productivity improvement by SPM	1
50		2nd		Principles of SPM design	1
51		3rd		Examples of SPM	1
52		4th		Class Test	1

53	14th	1st	**Module-05**	Types of maintenance	1
54		2nd		Repair cycle analysis	1
55		3rd		Repair complexity	1
56		4th		Maintenance manual, Maintenance records	1
57	15th	1st		Housekeeping	1
58		2nd		Introduction to Total Productive Maintenance (TPM)	1
59		3rd		Previous year question paper discussion	1
60		4th		Class Test	1
Total					**60**