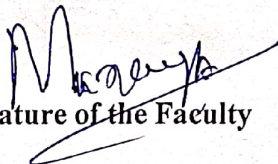
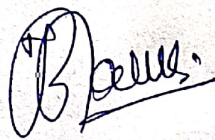


Lesson Plan

Name of the Institute:		C. V. Raman Polytechnic
Department:		Mechanical Engineering
Semester/Division/Branch:		6 th Sem/ME
Subject Name with code:		Advance Manufacturing Processes(Th4)
Total No. of Class (Required):		60
Faculty Name:		Mr.Manoj Kumar Nayak
Class No.	<i>Brief description of the Topic/Chapter to be taught</i>	Remarks
1	Introduction – comparison with traditional machining.	
2	Introduction – comparison with traditional machining.	
3	Ultrasonic Machining: principle, Description of equipment, applications.	
4	Ultrasonic Machining: principle, Description of equipment, applications.	
5	Ultrasonic Machining: principle, Description of equipment, applications.	
6	Electric Discharge Machining: Principle, Description of equipment	
7	Dielectric fluid, tools (electrodes), Process parameters, Output characteristics, applications.	
8	Output characteristics, applications.	
9	Wire cut EDM: Principle	
10	Description of equipment, controlling parameters; applications.	
11	Abrasive Jet Machining: principle, description of equipment, Material removal rate, application.	
12	AJM-description of equipment, Material removal rate, application.	
13	AJM-description of equipment, Material removal rate, application.	
14	Laser Beam Machining: principle, description of equipment, Material removal rate, application.	
15	Laser Beam Machining: principle, description of equipment, Material removal rate, application.	
16	Electro Chemical Machining: principle, description of equipment, Material removal rate, application.	
17	Electro Chemical Machining: principle, description of equipment, Material removal rate, application.	
18	Electro Chemical Machining: principle, description of equipment, Material removal rate, application.	
19	Plasma Arc Machining – principle, description of equipment, Material removal rate, Process parameters, performance characterization, Applications.	
20	Plasma Arc Machining – principle, description of equipment, Material removal rate, Process parameters, performance characterization, Applications.	
21	Plasma Arc Machining – principle, description of equipment, Material removal rate, Process parameters, performance characterization, Applications.	
22	Electron Beam Machining - principle, description of equipment, Material removal rate, Process parameters, performance characterization, Applications.	
23	Electron Beam Machining - principle, description of equipment, Material removal rate, Process parameters, performance characterization, Applications.	
24	Electron Beam Machining - principle, description of equipment, Material removal rate, Process parameters, performance characterization, Applications.	

25	Processing of plastics.	
26	Molding processes: Injection molding	
27	Molding processes: Compression molding	
28	Molding processes: Transfer molding	
29	Extruding; Casting; Calendaring.	
30	Extruding; Casting; Calendaring.	
31	Fabrication methods-Sheet forming, Blow molding	
32	Fabrication methods-Sheet forming, Blow molding	
33	Fabrication methods- Laminating plastics (sheets, rods & tubes), Reinforcing.	
34	Applications of Plastics.	
35	Introduction, Need for Additive Manufacturing	
36	Fundamentals of Additive Manufacturing, AM Process Chain	
37	Fundamentals of Additive Manufacturing, AM Process Chain	
38	Advantages and Limitations of AM, commonly used Terms	
39	Classification of AM process, Fundamental Automated Processes	
40	Distinction between AM and CNC, other related technologies.	
41	Application –Application in Design, Aerospace Industry, Automotive Industry, Jewelry Industry	
42	Arts and Architecture. RP Medical and Bioengineering Applications.	
43	Web Based Rapid Prototyping Systems.	
44	Web Based Rapid Prototyping Systems.	
45	Concept of Flexible manufacturing process, concurrent engineering	
46	production tools like capstan and turret lathes	
47	Rapid prototyping processes.	
48	Rapid prototyping processes.	
49	Concept, General elements of SPM	
50	Concept, General elements of SPM	
51	Productivity improvement by SPM, Principles of SPM design.	
52	Productivity improvement by SPM, Principles of SPM design.	
53	Types of maintenance	
54	Repair cycle analysis	
55	Repair complexity	
56	Maintenance manual	
57	Maintenance records	
58	Housekeeping.	
59	Introduction to Total Productive Maintenance	
60	Total Productive Maintenance	


Signature of the Faculty


Signature of the H.O.D