ARYAN SCHOOL OF ENGINEERING & TECHNOLOGY

Dicipline: Mechanical Engg	Semester: 6th	Name of the Teaching Faculty: Shashanka, Sesharao parda	
Subject: Advance Manufacturing Processes	No of Days/Week Class Allotted: 4	Semester From date: 10.02.22 To date 18.06.22	No.of Weeks: 15

WEEK	Class Day	Theory Topics
1st	1st	1.0-Modern Machining Process 1.1:- Introduction :- Comparision with traditional machining. Difference between AMP & Traditional machining process.
	2nd	1.2; Introduction to Ultrasonic Machining process Principle.
	3rd	1.2. Description of equipment of USM process, Application.
	4th	1.3. Principle of Electric Discharge Machining Description of equipment.
	5th	
2nd	1st	1.3. Description of electrodes, Dielectric fluid, Process parameters.
	2nd	1.3. Output characteristics, applications,
	3rd	1.4. Wire cut EDM, Principle, Description of Equipment
	4th	1.4. Controlling parameters, applications.
	5th	
3nd	1st	1.5. Abrasive Jet Machining :- Principle, description of Equipment.
	2nd	1.5. Material Removal rate of AJM and application.
	3rd	1.6:- Laser Beam Machining : Principle, description of Equipments.
	4th	1.6. Material Removal rate, application
	5th	

WEEK	Class Day	Theory Topics
4th	1st	1.7 · Principle of Electro Chemical Machining Description of Equipment
	2nd	1.7 · Material removal Rate, applications.
	3rd	1.8 · Principle Plasma Arc Machining, description of equipment · Material Removal rate.
	4th	1.8 Process Parameter, performance characterization Applications.
	5th	
5th	1st	1.9: Electro Beam Machining · Principle, description of equipment.
	2nd	1.9. Material Removal Rate · Process Parameter Performance characterization
	3rd	1.9. Applications of EBM.
	4th	(CLASS TEST -1)
	5th	
6th	1st	2.0. Plastic Processing :- Introduction to Polymer, Thermoplastic & Thermosetting
	2nd	2.0. Properties of plastics & Structure.
	3rd	2.1. Processing of plastics.
	4th	2.2. Injection Moulding and its applications.
	5th	

ARYAN SCHOOL OF ENGINEERING & TECHNOLOGY

Dicipline: Mechanical Engg	Semester: 6th	Name of the Teaching Faculty: Shashanka Sekhar Panda	
Subject: Advance Manufacturing Process.	No of Days/Week Class Allotted: 4	Semester From date: 10.03.22 To date 18.06.22	No.of Weeks: 15

WEEK	Class Day	Theory Topics
7th	1st	2.2. Compression Molding, Process & Application
	2nd	2.2. Transfer Moulding, Process & Application
	3rd	2.3. Extruding, Casting, Calendering
	4th	2.4. Short foaming, Blow Moulding
	5th	
8th	1st	2.4. Laminating plastics, (Sheets, rods, and tubes) Reinforcing.
	2nd	2.5. Applications of plastics.
	3rd	← Assignment → ← Double Clearing Class →
	4th	3.0. Additive Manufacturing Process :- 3.1. Introduction, Difference from Conventional Manufacturing process
	5th	
9th	1st	3.1. ~~A~~Need for Additive Manufacturing. 3.2. AM Process Chain,
	2nd	3.3. Advantages and limitation of AM, Commonly used terms.
	3rd	3.4. Classification of AM process.
	4th	3.4. Classification of AM process (Contd)
	5th	

WEEK	Class Day	Theory Topics
10th	1st	3.4. fundamental Automated Processes.
	2nd	3.4. Distinction between AM & CNC, other related tehonological.
	3rd	3.5 - Application in Design, Aerospace Industry Automotive industry
	4th	3.5. Jewelery Industry, Arts and Architecture
	5th	
11th	1st	3.5. RP Medical and Bioengineering Application
	2nd	3.6, Web Based Rapid Prototyping Systems.
	3rd	3.7. Concept of flexible Manufactring Process, Concurrent Engineering.
	4th	3.7. Production tools like Capstan & turret Lathes.
	5th	
12th	1st	3.7. Concept of rapid Prototyping processes.
	2nd	4.0. Special Purpose Machines (SPM). Introduction.
	3rd	4.1. Concept. General elements of SPM.
	4th	4.2. Productivity improvement by SPM.
	5th	

ARYAN SCHOOL OF ENGINEERING & TECHNOLOGY

Dicipline: Mechanical Eng	Semester: 6TH	Name of the Teaching Faculty: Shashanta Sekhar Panda	
Subject: Advanced Manufacturing Process	No of Days/Week Class Allotted: 4	Semester From date: 10.02.22 To date 18.06.22	No.of Weeks: 15

WEEK	Class Day	Theory Topics
13th	1st	4.3 Principles of SPM design.
	2nd	4.4 Different types of SPM Machines. (VIDEOS)
	3rd	(CLASS TEST - II)
	4th	5.0. Maintenance of Machine Tools.
	5th	
14th	1st	5.1. Types of maintaince.
	2nd	5.1. Types of maintenance (contd.)
	3rd	5.2. Repair Cycle. Analysis.
	4th	5.2. Repair complexity.
	5th	
15th	1st	5.3 Maintenance Manual.
	2nd	5.4. Maintenance records, House keepiers.
	3rd	5.5. Introduction to Total Productive Maintenaice (TPM)
	4th	5.5. TPM Process (contd).
	5th	