



GOVERNMENT POLYTECHNIC, KORAPUT

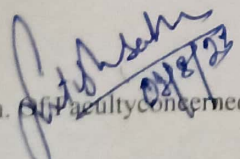
DEPARTMENT OF MECHANICAL ENGINEERING


Discipline: MECHANICAL ENGG	Semester: 3 RD	Name of the Teaching Faculty: Satish Kumar Sahu
Subject: PRODUCTION TECHNOLOGY	No. of days/per week class allotted: 4	Semester From date: 1/8/23 To Date: 30/11/23 No. of Weeks:
COURSE OUTCOMES	CO1: To make the students understand Fundamentals of Casting. CO2: To provide insight into Sand casting & other casting processes. CO3: To impart fundamentals of Gas Welding & Arc Welding. CO4: To teach principles of Advanced welding process & their applications. CO5: To impart knowledge on Bulk forming process. CO6: To provide understanding of various sheet metal forming & processing of plastics.	
Week	Class Day	Theory/Practical Topics
1 ST	1 ST	EXTRUSION: DEFINITION & CLASSIFICATION.
	2 ND	EXPLAIN: DIRECT, INDIRECT & IMPACT EXTRUSION PROCESSES.
	3 RD	DEFINE ROLLING, & ITS CLASSIFICATION.
	4 TH	DIFFERENCE BETWEEN COLD ROLLING & HOT ROLLING.
2 ND	1 ST	DIFFERENT TYPES OF ROLLING MILLS USED IN ROLLING PROCESS.
	2 ND	REVISION
	3 RD	ASSIGNMENT - I
	4 TH	WELDING & VARIOUS WELDING PROCESSES.
3 RD	1 ST	EXPLAIN FLUXES USED IN WELDING.
	2 ND	EXPLAIN OXY-ACETYLENE WELDING PROCESS.
	3 RD	EXPLAIN VARIOUS TYPES OF FLAMES USED IN OXY-ACETYLENE WELDING PROCESS.
	4 TH	EXPLAIN VARIOUS TYPES OF FLAMES USED IN OXY-ACETYLENE WELDING PROCESS. (CONTD...)
4 TH	1 ST	EXPLAIN ARC WELDING PROCESS.
	2 ND	EXPLAIN ARC WELDING PROCESS.(CONTD...)
	3 RD	SPECIFY ARC WELDING ELECTRODES.
	4 TH	RESISTANCE WELDING & ITS CLASSIFICATION.
5 TH	1 ST	VARIOUS RESISTANCE WELDING PROCESSES: BUTT WELDING, SPOT WELDING, FLASH WELDING.
	2 ND	PROJECTION WELDING, SEAM WELDING (CONTD...)
	3 RD	EXPLAIN TIG & MIG WELDING PROCESSES.
	4 TH	EXPLAIN TIG & MIG WELDING PROCESSES. (CONTD...)
6 TH	1 ST	DIFFERENT WELDING DEFECTS
	2 ND	CAUSES & REMEDIES. (CONTD...)
	3 RD	ASSIGNMENT - II
	4 TH	CASTING & VARIOUS CASTING PROCESSES.
7 TH	1 ST	CASTING & VARIOUS CASTING PROCESSES. (CONTD...)
	2 ND	EXPLAIN THE PROCEDURE OF SAND MOULD CASTING.
	3 RD	EXPLAIN THE PROCEDURE OF SAND MOULD CASTING. (CONTD...)

8 TH	4 TH	EXPLAIN DIFFERENT TYPES OF MOLDING SANDS WITH THEIR COMPOSITION & PROPERTIES.
	1 ST	CLASSIFY DIFFERENT PATTERN.
	2 ND	STATE DIFFERENT PATTERN ALLOWANCES. (CONTD...)
9 TH	3 RD	CLASSIFY CORE.
	4 TH	CONSTRUCTION OF CUPOLA & CRUCIBLE FURNACE.
	1 ST	WORKING OF CUPOLA & CRUCIBLE FURNACE. (CONTD...)
	2 ND	EXPLAIN DIE CASTING METHOD.
10 TH	3 RD	CENTRIFUGAL CASTING SUCH AS TRUE CENTRIFUGAL CASTING.
	4 TH	CENTRIFUGING WITH ADVANTAGES, LIMITATIONS & AREA OF APPLICATION. (CONTD...)
	1 ST	EXPLAIN VARIOUS CASTING DEFECTS.
	2 ND	IT'S CAUSES & REMEDIES. (CONTD...)
11 TH	3 RD	ASSIGNMENT - III
	4 TH	DEFINE POWDER METALLURGY PROCESS.
	1 ST	ADVANTAGES OF POWDER METALLURGY TECHNOLOGY TECHNIQUE. (PMMT)
	2 ND	METHODS OF PRODUCING COMPONENTS BY PMMT.
12 TH	3 RD	EXPLAIN SINTERING.
	4 TH	ECONOMICS OF POWDER METALLURGY.
	1 ST	REVISION
	2 ND	ASSIGNMENT - IV
13 TH	3 RD	PRESS WORKS: BLANKING, PIERCING, AND TRIMMING.
	4 TH	PRESS WORKS: BLANKING, PIERCING, AND TRIMMING. (CONTD...)
	1 ST	VARIOUS TYPES OF DIE & PUNCH.
	2 ND	VARIOUS TYPES OF DIE & PUNCH. (CONTD...)
14 TH	3 RD	SIMPLE, COMPOUND & PROGRESSIVE DIES.
	4 TH	VARIOUS ADVANTAGES & DISADVANTGES OF ABOVE DIES.
	1 ST	ASSIGNMENT - V
	2 ND	DEFINE JIGS & FIXTURES.
15 TH	3 RD	ADVANTAGES OF USING JIGS & FIXTURES.
	4 TH	STATE THE PRINCIPLE OF LOCATIONS.
	1 ST	METHODS OF LOCATION W.R.T 3-2-1 POINT LOCATION OF RECTANGULAR JIG.
	2 ND	LIST VARIOUS TYPES OF JIGS & FIXTURES.
15 TH	3 RD	REVISION
	4 TH	ASSIGNMENT - VI

LEARNING RESOURCES:

- 01 O.P. KHANNA PRODUCTION TECHNOLOGY, VOL - I& II DHANPAT RAI PUBLICATION
- 02 B.S RAGHUWANSHI WORKSHOP TECHNOLOGY, VOL- I& II DHANPAT RAI & CO
- 03 P.N. RAO MANUFACTURING TECHNOLOGY, VOL I&II TMH
- 04 P.C.SHARMA MANUFACTURING TECHNOLOGY, VOL- I S. CHAND

Sign. Of Faculty concerned

 04/07/23

Sign. Of HOD/VC

 04/07/23

Principal