

GOVT.POLYTECHNIC NAYAGARH

3rd SEMESTER MECHANICAL ENGINEERING (2023-24)

SUBJECT-PRODUCTION TECHNOLOGY

TOTAL PERIODS-60

NAME OF FACULTY: Mrs. Monalisa Sahoo, W/S Suptd. & HOD

THEORY-4P/WEEK

Semester from :01/08/2023 to 30/11/2023

Sl No.	week	Day	Topics to be covered
1	1 st	1 st day	Introduction to Metal Forming Processes
		2 nd day	Extrusion: Definition & Classification
		3 rd day	Direct and Indirect Extrusion process
		4 th day	Explain Impact extrusion process
Sl No.	week	Day	Topics to be covered
2	2 nd	1 st day	Define Rolling and Classification
		2 nd day	Differentiate between cold rolling and hot rolling process
		3 rd day	List the different types of rolling mills used in Rolling process
		4 th day	Doubt clearance and Revision
Sl No.	week	Day	Topics to be covered
3	3 rd	1 st day	Introduction to Welding
		2 nd day	Define Welding and classify various welding processes
		3 rd day	Fluxes used in welding.
		4 th day	Oxy-acetylene welding process
Sl No.	week	Day	Topics to be covered
4	4 th	1 st day	Types of flames used in Oxy-acetylene welding process
		2 nd day	Arc welding process
		3 rd day	Difference between DC and AC Arc welding process
		4 th day	Specification of Arc welding electrodes
Sl No.	week	Day	Topics to be covered
5	5 th	1 st day	Define Resistance welding and Classification
		2 nd day	Butt welding and Spot welding Process
		3 rd day	Flash welding and Projection welding Process
		4 th day	Seam welding with advantages and applications
Sl No.	week	Day	Topics to be covered
6	6 th	1 st day	TIG Welding process with advantages and applications

		2 nd day	MIG Welding process with advantages and applications
		3 rd day	State different Welding defects with causes
		4 th day	Remedies of welding defects
Sl No.	week	Day	Topics to be covered
7	7 th	1 st day	Define Casting and Classify the various Casting processes.
		2 nd day	Explain the procedure of Sand mould casting
		3 rd day	Difference between Green sand and Dry sand mould casting
		4 th day	Explain different types of molding sands with their composition and properties
Sl No.	week	Day	Topics to be covered
8	8 th	1 st day	Classify different pattern and State various pattern allowances
		2 nd day	Classification of Cores
		3 rd day	Describe construction and working of cupola furnace
		4 th day	Describe construction and working of crucible furnace
Sl No.	week	Day	Topics to be covered
9	9 th	1 st day	Die casting method with advantages, application and limitations
		2 nd day	True centrifugal casting with advantages, limitation and area of application
		3 rd day	Centrifugal casting with advantages, limitation and area of application
		4 th day	Various casting defects with their causes and remedies
Sl No.	week	Day	Topics to be covered
10	10 th	1 st day	Define powder metallurgy process
		2 nd day	State advantages of powder metallurgy technology technique
		3 rd day	Describe the methods of producing components by powder metallurgy technique
		4 th day	Sintering process of powder metallurgy
Sl No.	week	Day	Topics to be covered
11	11 th	1 st day	Economics of powder metallurgy
		2 nd day	Introduction to Press Work

		3 rd day	Blanking and Piercing operation of Press work
		4 th day	Trimming operation of Press work
Sl No.	week	Day	Topics to be covered
12	12 th	1 st day	List various types of dies and punch
		2 nd day	Explain Simple and Compound Dies
		3 rd day	Various advantages and disadvantages of above dies
		4 th day	Define jigs and fixtures
Sl No.	week	Day	Topics to be covered
13	13 th	1 st day	State advantages of using jigs and fixtures
		2 nd day	State the principle of locations
		3 rd day	Describe the methods of location with respect to 3-2-1 point location of rectangular jig
		4 th day	Describe the methods of location with respect to 3-2-1 point location of rectangular jig
Sl No.	week	Day	Topics to be covered
14	14 th	1 st day	List various types of Fixtures
		2 nd day	List various types of Jigs
		3 rd day	Limitation of Jigs and Fixtures
		4 th day	Progressive and Compound Dies
Sl No.	week	Day	Topics to be covered
15	15 th	1 st day	Doubt clearance and Revision
		2 nd day	Doubt clearance and Revision
		3 rd day	Doubt clearance and Revision
		4 th day	Doubt clearance and Revision