

2023-2024

Discipline: <u>MECHANICAL</u>	Semester: <u>3rd</u>	Name of the Teaching Faculty: <u>ER. BIKASH MURMU</u> <u>Sr.Lecturer Mechanical</u>
Subject: TH-1 PRODUCTION TECHNOLOGY	No. of days/per week class allotted: 4	Semester From date: 01/08/2023 To date: No of weeks: 15
Week	Class Day	Theory Topics:
1st	1st	Metal Forming Processes: Extrusion: Definition & Classification
	2nd	Explain direct, indirect and impact extrusion process.
	3rd	Explain direct, indirect and impact extrusion process.
	4th	Define rolling. Classify it.
2nd	1st	Differentiate between cold rolling and hot rolling process.
	2nd	List the different types of rolling mills used in Rolling process.
	3rd	Welding Define welding and classify various welding processes.
	4th	Explain fluxes used in welding.
3rd	1st	Explain Oxy-acetylene welding process.
	2nd	Explain various types of flames used in Oxy-acetylene welding process.
	3rd	Explain Arc welding process.
	4th	Specify arc welding electrodes.
4th	1st	Define resistance welding and classify it.
	2nd	Describe various resistance welding processes such as butt welding, spot welding, flash welding, projection welding and seam welding.
	3rd	Describe various resistance welding processes such as butt welding, spot welding, flash welding, projection welding and seam welding.
	4th	Describe various resistance welding processes such as butt welding, spot welding, flash welding, projection welding and seam welding.
5th	1st	Explain TIG and MIG welding process
	2nd	Explain TIG and MIG welding process
	3rd	State different welding defects with causes and remedies.
	4th	State different welding defects with causes and remedies.


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6 th	1 st	Casting Define Casting and Classify the various Casting processes.
	2 nd	Explain the procedure of Sand mould casting.
	3 rd	Explain the procedure of Sand mould casting.
	4 th	Explain different types of molding sands with their composition and properties.
7 th	1 st	Explain different types of molding sands with their composition and properties.
	2 nd	Classify different pattern and state various pattern allowances.
	3 rd	Classify core.
	4 th	Describe construction and working of cupola and crucible furnace.
8 th	1 st	Describe construction and working of cupola and crucible furnace.
	2 nd	Explain die casting method.
	3 rd	Explain centrifugal casting such as true centrifugal casting, centrifuging with advantages, limitation and area of application.
	4 th	Explain centrifugal casting such as true centrifugal casting, centrifuging with advantages, limitation and area of application.
9 th	1 st	Explain various casting defects with their causes and remedies.
	2 nd	Explain various casting defects with their causes and remedies.
	3 rd	Powder Metallurgy Define powder metallurgy process.
	4 th	State advantages of powder metallurgy technology technique
10 th	1 st	Describe the methods of producing components by powder metallurgy technique.
	2 nd	Describe the methods of producing components by powder metallurgy technique.
	3 rd	Explain sintering.
	4 th	Economics of powder metallurgy.


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11 th	1 st	Press Work Describe Press Works: blanking, piercing and trimming.
	2 nd	Describe Press Works: blanking, piercing and trimming.
	3 rd	List various types of die and punch
	4 th	Explain simple, Compound & Progressive dies
12 th	1 st	Explain simple, Compound & Progressive dies
	2 nd	Explain simple, Compound & Progressive dies
	3 rd	Describe the various advantages & disadvantages of above dies
	4 th	Jigs and fixtures Define jigs and fixtures
13 th	1 st	State advantages of using jigs and fixtures
	2 nd	State advantages of using jigs and fixtures
	3 rd	State the principle of locations
	4 th	State the principle of locations
14 th	1 st	Describe the methods of location with respect to 3-2-1 point location of rectangular jig
	2 nd	Describe the methods of location with respect to 3-2-1 point location of rectangular jig
	3 rd	Describe the methods of location with respect to 3-2-1 point location of rectangular jig
	4 th	List various types of jig and fixtures.
15 th	1 st	List various types of jig and fixtures.
	2 nd	Discuss the previous year question
	3 rd	Discuss the previous year question
	4 th	Discuss the previous year question


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