

Manufacturing Technology(Th-2)

Lesson Plan for the Academic Semester 2023(s)

Government Polytechnic ,Balasore

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| Discipline: Mechanical Engg. | Semester: 4 th | Name of the Faculty: Janmejay Rout |
| Subject: MT-(Th-2) | No. of days /per week class allotted: 4p/w | Academic Session- 2023(s) |
| WEEK | PERIOD | Topic |
| 1 ST | 1 ST | Unit -1: Introduction of tool material 1.1-Composition of tool material |
| | 2 ND | 1.2-Physical properties of such type of tool material |
| | 3 RD | Uses of such type of tool material |
| | 4 TH | Details on various tool material and their application |
| 2 ND | 1 ST | Unit-2:-cutting tool 2.1-cutting action of various tool material |
| | 2 ND | Chisel ,hacksaw blade, cutting action |
| | 3 RD | Reamer cutting action |
| | 4 TH | 2.2-Turning tool geometry and purpose of tool angle |
| 3 RD | 1 ST | 2.3- Machining process parameter |
| | 2 ND | 2.4-Coolant and Lubricants in machining and purpose |
| | 3 RD | Unit-3:- Lathe machine 3.1-construction and working of CNC Lathe and Lathe |
| | 4 TH | Major components and various operation on lathe |
| 4 th | 1 st | Safety major during machining |
| | 2 nd | 3.2-Capstan Lathe-Difference with respect to engine lathe |
| | 3 rd | Major components and function of capstan lathe |
| | 4 th | Definition of multiple tool holder |
| 5 th | 1 st | 3.3- Turret Lathe different with respect to capstan lathe |
| | 2 nd | 3.4-Tooling layout for preparation of a hexagonal bolt and bush |
| | 3 rd | Unit-4:- shaper 4.1-potential application of area of a shaper machine |
| | 4 th | 4.2- Major components and their functions |
| 6 th | 1 st | 4.3- Explain the automatic feed mechanism |
| | 2 nd | 4.4-Explanation of construction of tool head |
| | 3 rd | 4.5- Explanation of quick return mechanism through sketch |
| | 4 th | 4.6-Specification of shaper machine |
| 7 th | 1 st | Unit-5:-Planning Machine 5.1-Application of planner |
| | 2 nd | Difference with respect to shaper |
| | 3 rd | 5.2- Major Components of planner and functions |
| | 4 th | 5.3- Drive mechanism |
| 8 th | 1 st | 5.4-Working of tool and tool support |

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| | 2 nd | 5.5-Clamping of work through sketch |
| | 3 rd | Unit-6:-Milling Machine |
| | | 6.1- Types of milling machine |
| 9 th | 4 th | Various operation of milling machine |
| | 1 st | Application of milling machine |
| | 2 nd | Function and application of milling machine |
| | 3 rd | 6.2- Working holding attachment |
| | 4 th | 6.3-Construction working of simple dividing head |
| 10 th | 1 st | 6.4- Procedure of simple and compound indexing |
| | 2 nd | 6.5-Different illustration indexing method |
| | 3 rd | Unit-7:-Slotter |
| | | 7.1-Major components of slotter |
| | 4 th | Major function of slotter |
| 11 th | 1 st | 7.2-Construction of slotter machine |
| | 2 nd | Working principle of slotter machine |
| | 3 rd | 7.3- Tools are used in slotter |
| | 4 th | Application and various function of slotter |
| 12 th | 1 st | Unit-8:-Grinding |
| | | 8.1-Various grinding operation |
| | 2 nd | 8.2- Manufacturing of grinding wheel |
| | 3 rd | 8.3-Selection grinding wheel |
| | 4 th | 8.4- Specification of grinding wheel |
| 13 th | 1 st | Cylindrical grinder , surface grinder |
| | 2 nd | Center less grinder |
| | 3 rd | Unit-9:-Internal Machining Operation |
| | | 9.1-Bench pillar drilling machine |
| | 4 th | Radial drilling machine |
| 14 th | 1 st | 9.2- Basic principle of boring |
| | 2 nd | Different between boring and drilling |
| | 3 rd | 9.3-Broaching types and pull types |
| | 4 th | Push types |
| 15 th | 1 st | Advantages of broaching and application |
| | 2 nd | Unit-10:-Surface Finishing and Lapping |
| | | 10.1- definition of surface finish |
| | 3 rd | 10.2-Description of lapping |
| | 4 th | Specific cutting of Lapping |

Janmejay Rout
Janmejay Rout
(PTGF Mechanical Engg.)

14/2/23

15/2/23