

| “PVC” NSSK G.P Bilaspur at Kalol | | Department: -MECHANICAL ENGG. (5 th Sem) Subject- MT-III | | | | |
|-------------------------------------|-------------|---|--|--|------------------------------------|---------|
| SYLLABUS COVERAGE | | Total Periods-42 | | | Theory -42 | |
| Sr No | Period No's | Topic | Details | Instruction Reference | Additional Study Recommended | Remarks |
| 1 | 1-12 | Milling | Introduction to milling, Types of milling machines, Constructional features of Knee and Column type milling machine, Specifications of milling machine, Milling operations-plain, angular, form, straddle and gang milling, Milling cutters - Geometry and types, Cutting speed and feeds, Indexing-simple, compound, differential and angular, Job holding devices, Introduction to machining centre. | Production technology by R.K Jain & Elements of workshop technology by SK Chaudhary and Hajra, | | |
| 2 | 13-18 | Presses and Press Tools | Types of Presses, their applications, Types of dies, Types of die sets, Punches, Pads, Die clearance, Stripper plates, Stops Pilots, Stock Layout | ----do--- | | |
| 3 | 19-24 | Broaching | Introduction, Types of broaching machines, Types of broaches and their use | ----do--- | | |
| 4 | 25-28 | Metal Coating Processes | Metal spraying, Galvanizing, Electroplating, Anodizing | ----do--- | | |
| 5 | 29-35 | Gear Generating and Finishing Processes | Gear tooth elements, Gear milling, Introduction to gear shaping, Working principle of gear shaping machine, Working principle of gear hobbing machine, Introduction to gear finishing operations | ----do--- | | |

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| 6 | 36-42 | Advanced Welding Techniques | Working principle, process details, equipment details, advantages, limitations and applications of: Thermit Welding, MIG Welding, TIG Welding, Atomic hydrogen Welding, Electron beam welding Laser beam welding, Introduction to friction welding. | ----do--- | | |
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| Approved | HOD Sign. |
| Date | 14/9/21  |