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| Discipline  :**MECHANICAL ENGG** | Semester  :**3rd** | Name of the Teaching Faculty: **DIBYAJYOTI PANDA** |
| Subject:**Producti** | No. of | No. of Weeks:**15**  Semester From date : **15.09.2022** To Date:**22.12.2022** |
| **on Technology** | days/per  week |  |
|  | class |  |
|  | allotted:**0** |  |
|  | **4** |  |
| Week | Class Day | Theory / Practical Topics |
| 1ST | 1ST | Extrusion: Definition & Classification |
|  | 2ND | Explain direct, indirect and impact extrusion process. |
|  | 3RD | Define rolling .Classify it. |
|  | 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 | List the different types of rolling mills used in Rolling process |
|  | 4TH | Define welding and classify various welding processes. |
| 3RD | 1ST | Define welding and classify various welding processes |
|  | 2ND | Explain fluxes used in welding. |
|  | 3RD | Explain Oxy-acetylene welding process. |
|  | 4TH | Explain various types of flames used in Oxy-acetylene welding process. |
| 4TH | 1ST | Explain Arc welding process. |
|  | 2ND | Specify arc welding electrodes. |
|  | 3RD | Define resistance welding and classify it. |
|  | 4TH | Define resistance welding and classify it. |
| 5TH | 1ST | Describe various resistance welding processes such as butt welding,spotwelding,flashwelding,projectionweldingandseamwelding |
|  | 2ND | Describe various resistance welding processes such as butt welding,spotwelding,flashwelding,projectionweldingandseamwelding. |
|  | 3RD | Describe various resistance welding processes such as butt  welding, spot welding, flash welding, projection welding andseam welding. |
|  | 4TH | Explain TIG and MIG welding process |
| 6TH | 1ST | State different welding defects with causes and remedies |
|  | 2ND | State different welding defects with causes and remedies |
|  | 3RD | State different welding defects with causes and remedies |
|  | 4TH | Define Casting and Classify the various Casting processes. |
| 7TH | 1ST | Define Casting and Classify the various Casting processes |
|  | 2ND | Define Casting and Classify the various Casting processes |
|  | 3RD | Explain the procedure of Sand mould casting. |
|  | 4TH | Explain different types of molding sands with their composition and properties |
| 8TH | 1ST | Explain different types of molding sands with their composition and properties |
|  | 2ND | Classify different pattern and state various pattern allowances |
|  | 3RD | Classify different pattern and state various pattern allowances |
|  | 4TH | Classify core. |
| 9TH | 1ST | Describe construction and working of |

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|  |  | cupola and crucible furnace |
|  | 2ND | Describe construction and working of cupola and crucible furnace. |
|  | 3RD | Explain die casting method. |
|  | 4TH | Explain centrifugal casting such as true centrifugal  casting,centrifugingwithadvantages,limitation andareaofapplication. |
| 10TH | 1ST | Explain centrifugal casting such as true centrifugal casting, centrifuging with advantages, limitation and areaof application. |
|  | 2ND | Explainvariouscastingdefectswiththeir causes andremedies |
|  | 3RD | Explain various casting defects with their causes and remedies |
|  | 4TH | Define powder metallurgy process. |
| 11TH | 1ST | Define powder metallurgy process. |
|  | 2ND | State advantages of powder metallurgy technology technique |
|  | 3RD | Describe the methods of producing components by powder metallurgy technique. |
|  | 4TH | Describe the methods of producing components by powder metallurgy technique |
| 12TH | 1ST | Explain sintering. |
|  | 2ND | Economics of powder metallurgy |
|  | 3RD | Describe PressWorks:blanking, piercing and trimming. |
|  | 4TH | Describe PressWorks: blanking ,piercing andt rimming. |
| 13TH | 1ST | List various types of die and punch |
|  | 2ND | Explain simple, Compound & Progressive dies |
|  | 3RD | Explain simple, Compound & Progressive dies |
|  | 4TH | Describe the various advantages & disadvantages of above dies |
| 14TH | 1ST | Describe the various advantages & disadvantages of above dies |
|  | 2ND | Define jigs and fixtures |
|  | 3RD | State advantages of using jig sand fixtures |
|  | 4TH | State the principle of locations |
| 15TH | 1ST | Describe the methods of location with respect to 3-2-1 point location of rectangular jig |
|  | 2ND | Describe the methods of location with respect to 3-2-1 point location of rectangular jig |
|  | 3RD | List various types of jig and fixtures. |
|  | 4TH | Lis tvarious types of jig and fixtures. |

**Learning Resouces:**

1. ProductionTechnology, Vol-I&IIbyO.P.Khanna,DhanpatRaiPublication
2. Workshoptechnology,Vol-I&II by B.SRaghuwanshi,DhanpatRai&Co
3. Manufacturing technology, Vol-&II byP.N.Rao,TMH
4. Manufacturingtechnology,Vol-I byP.C.Sharma, S.Chand

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