**C. V. RAMAN POLYTECHNIC**

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| **3rd SEMESTER/ MECHANICAL ENGINEERING** |
| **TH-1 PRODUCTION TECHNOLOGY** |

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| Q1. | Answer **All** questions | 2 x 10 |
|  | Define extrusion. |  |
|  | Define rolling. |  |
|  | What is flux? Write its importance. |  |
|  | What is a jig? |  |
|  | What are the steps in powder metallurgy? |  |
|  | What is a compound die? |  |
|  | What is butt welding? |  |
|  | List the types of rolling mills used in rolling process. |  |
|  | Define casting. |  |
|  | Define sintering. |  |
| Q2. | Answer **Any Six** Questions | 5 x 6 |
| a. | Differentiate between hot and cold rolling process. |  |
| b. | What are various types of flames used in OAW process? |  |
| c. | What are welding defects? Write its causes and remedies. |  |
| d. | Describe construction and working principle of Cupola or Crucible furnace with neat sketch. |  |
| e. | What are various casting defects. Write its causes and remedies. |  |
| f. | Explain centrifugal casting with advantages, disadvantages and area of applications. |  |
| g. | Describe any two: blanking, piercing, trimming |  |  |
|  | **ANSWER ANY THREE QUESTIONS** | 10 x 3 |
| Q3. | Explain Oxy-acetylene process with a neat sketch. | 10 |
| Q4. | Explain arc welding with a neat sketch. | 10 |
| Q5. | Explain TIG and MIG welding process with neat sketch. | 10 |
| Q6. | Define powder metallurgy. State the advantages, disadvantages and methods of producing powder. | 10 |
| Q7. | Define Jigs and fixtures. State the principle of 3-2-1 location points. | 10 |