



P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Third Semester, B.E. - Industrial and Production Engineering

Semester End Examination; Dec - 2017 / Jan - 2018

Production Technology - I

Time: 3 hrs

Max. Marks: 100

Note: Answer FIVE full questions, selecting ONE full question from each unit.

UNIT - I

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|---|----|--|----|
| 1 | a. | Define casting. With a neat sketch, explain the steps involved in Metal Casting Process. | 10 |
| | b. | Explain classification of Manufacturing Process. | 10 |
| 2 | a. | What is Pattern? Explain the various Pattern allowances. | 10 |
| | b. | With a neat sketch, explain the various types of risers. | 10 |

UNIT - II

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|---|----|--|----|
| 3 | a. | Explain the types of moulding sand. | 10 |
| | b. | Sketch and Explain jolt type moulding machine. | 10 |
| 4 | a. | Explain with neat sketch steps involved in shell mould. | 10 |
| | b. | With neat sketch, discuss CO ₂ mould. Mention its advantages and disadvantages. | 10 |

UNIT - III

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|----|----|---|----|
| 5 | a. | With a neat sketch, explain True centrifugal casting process. | 10 |
| | b. | Sketch and explain direct arc electric furnace. | 10 |
| 6. | | With a neat sketch, explain constructional feature and Zones in cupola furnace. Mention its advantages and disadvantages. | 20 |

UNIT - IV

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|---|----|---|----|
| 7 | a. | List classification of welding process. Mention its advantages and disadvantages. | 10 |
| | b. | With a neat sketch, explain Inert gas welding (TIG). | 10 |
| 8 | a. | With a neat sketch, explain oxy-Acetylene welding outfit. | 10 |
| | b. | With neat sketch, explain gas torch construction and working in welding. | 10 |

UNIT - V

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|----|----|--|----|
| 9 | a. | With a neat sketch, explain Resistance welding. | 10 |
| | b. | With a neat sketch, explain laser welding. | 10 |
| 10 | a. | List and Explain the different defects in welding process. | 10 |
| | b. | Explain with a neat sketch Thermit welding. | 10 |

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