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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech III Year I Semester Supplementary Examinations December-2021

MACHINE TOOLS

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 60

PART-A

(Answer all the Questions 5 x 2 = 10 Marks)

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|---|---|-----------------------------------|----|----|
| 1 | a | Define the term of metal cutting. | L1 | 2M |
| | b | What do you mean tool signature? | L2 | 2M |
| | c | Define cutting speed. | L1 | 2M |
| | d | How the lathe is specified? | L2 | 2M |
| | e | Define the term of Drilling. | L1 | 2M |

PART-B

(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

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|---|---|---|----|----|
| 2 | a | How can you classify the cutting tools? | L1 | 5M |
| | b | Discuss about machining metals. | L2 | 5M |

OR

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|---|---|--|----|----|
| 3 | a | Define single point cutting tool elements. | L1 | 5M |
| | b | What are the conditions for producing continuous chip? | L1 | 5M |

UNIT-II

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|---|---|---|----|----|
| 4 | a | Explain the stress and strain acting on the chip. | L2 | 5M |
| | b | Define cutting speed, feed and depth of cut. | L1 | 5M |

OR

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|---|---|--|----|----|
| 5 | a | What are the characteristics an ideal cutting tool material? | L1 | 5M |
| | b | Explain briefly (i) Coronite (ii) Ucon | L2 | 5M |

UNIT-III

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|---|---|--|----|----|
| 6 | a | What are the different types taper turning methods? Explain any one with sketch. | L1 | 5M |
| | b | Name the different types of lathe operations explain any two. | L2 | 5M |

OR

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|---|---|--|----|----|
| 7 | a | What are the difference between capstan and turret late? | L1 | 5M |
| | b | What is meant by tool layout of the turret lathe? | L1 | 5M |

UNIT-IV

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|---|---|--|----|----|
| 8 | a | Difference between shaper, planner and slotter | L3 | 5M |
| | b | What is the advantage of planner? | L1 | 5M |

OR

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|---|---|---|----|----|
| 9 | a | What is difference between up milling and down milling? | L2 | 5M |
| | b | How the milling machines are broadly classified? | L1 | 5M |

UNIT-V

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|----|---|--|----|----|
| 10 | a | What is an abrasive? How the abrasive is classified? | L1 | 5M |
| | b | What is bond? Principal and explain the bonds. | L1 | 5M |

OR

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|----|---|---|----|----|
| 11 | a | What is the difference between jig and fixture? | L1 | 5M |
| | b | How the broaching machines are are classified? | L2 | 5M |

END