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

(An Autonomous Institution affiliated to VTU, Belgaum)

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

Semester End Examination; June/July - 2015

Production Technology - II

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. Write the specifications of a lathe. | 6 |
| b. With a neat sketch explain taper turning by swivelling the compound rest. | 8 |
| c. Differentiate between capstan lathe and an engine lathe. | 6 |
| 2 a. Differentiate between capstan and a turret lathe. | 10 |
| b. Explain bar feeding mechanism used in capstan & turret lathe. | 10 |

UNIT - II

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| 3 a. Name the different types of mechanism used in Shaper. Explain hydraulic shaper mechanism. | 12 |
| b. What are the main parts of a planing machine? Explain any two of them. | 8 |
| 4 a. Illustrate feed disc and automatic feed mechanism of a planing machine. | 12 |
| b. Write a note on speed, feed and depth of cut related to shaping machine. | 8 |

UNIT - III

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| 5. Discuss the operations to be performed using drilling machine. | 20 |
| 6 a. Differentiate between counterboring and countersinking. | 8 |
| b. Sketch and explain the following work holding device used in drilling operations : | 12 |
| (i) Step block (ii) Drill Jig (iii) Goose neck clamp. | |

UNIT - IV

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| 7 a. Explain index 69 divisions by compound indexing. | 10 |
| b. Write the elements of a plain milling cutter. | 10 |
| 8 a. Explain index 83 divisions by differential indexing. | 8 |
| b. With the help of a neat sketch explain the constructional features of column and knee type of milling machine. | 12 |

UNIT - V

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| 9 a. With the help of a block diagram explain horizontal and vertical surface grinder. | 12 |
| b. What is the bonding processes used for bonding the grinding wheel? Explain any one of them. | 8 |
| 10. Write a note on the following : | 20 |
| (i) Lapping (ii) Super finishing (iii) Abrasives (iv) Grinding wheel selection factors. | |