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

(An Autonomous Institution affiliated to VTU, Belagavi)

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

Semester End Examination; May / June - 2019

Manufacturing Technology - II

Time: 3 hrs

Max. Marks: 100

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

UNIT - I

- 1 a. Explain with the help of sketches, Feed mechanism and Half nut mechanism. 10
- b. Explain the step by step procedure of manufacturing of a hexagonal bolt using a turret lathe with suitable sketches. 10
- 2 a. Sketch and explain 3 jaw, 4 jaw chucks and explain its use in metal cutting practice. 10
- b. Explain with a schematic diagram a capstan lathe. 10

UNIT - II

- 3 a. Explain with the help of sketch any four types of drilling operations that can be carried out in a pillar drilling machine. 10
- b. Explain with the help of schematic diagram;
- i) Tool head of a shaper 10
- ii) Any one work holding device
- 4 a. Explain with a suitable schematic sketch a radial drilling machine and mention its parts. 10
- b. Explain with schematic sketches the various operations that can be performed in a planar. 10

UNIT - III

- 5 a. Explain with the help of schematic diagram the up-milling and down-milling concepts and discuss briefly the advantages and disadvantages. 10
- b. Explain the procedure to cut gear teeth in a milling machine and briefly explain with suitable illustrative example. 10
- 6 a. What are the principal parts of column and knee type of milling machine? Explain any two with suitable sketches. 10
- b. Explain with suitable illustrative sketch any four operations that can be performed in a milling machine. 10

UNIT - IV

- 7 a. Mention the kinds of grinding machines. Explain any one grinding machine with simple schematic sketch. 10
- b. Explain the concepts with suitable illustrations the balancing, tracing and dressing of grinding wheels. 10

- 8 a. Describe the bond and bonding process carried out in the manufacture of a grinding wheel. 10
- b. What is wet and dry grinding and explain briefly various commonly used grinding wheels used in practice and discuss its compositions. 10

UNIT - V

- 9 a. Explain the concepts of lapping and honing with the help of suitable sketches. 10
- b. Sketch and explain the various broaching methods. 10
- 10 a. Sketch and explain gear hobbing process. 10
- b. Explain the concept of super finishing and buffing in metal cutting with a suitable schematic sketch. 10

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