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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 - 2016 Production Technology - II

Time: 3 hrs Max. Marks: 100 *Note*: i) Answer *FIVE* full questions, selecting *ONE* full question from each unit. ii) Assume missing data suitably. UNIT - I 1 a. Name the different types of chucks used in a lathe. Give a brief description of each type. 12 b. With a neat sketch, explain taper turning by setting over the tailstock. 8 2 a. With a neat sketch, explain the construction features of lathe. 10 b. Differentiate between Capstan and Turret Lathe. 10 **UNIT - II** 3 a. With a neat sketch, explain the parts of the standard shaping machine. 10 b. Give a brief description of different types of Planning machines. 10 4 a. With a neat sketch, explain Crank and slotted lever Quick Return mechanism. 10 b. With a neat sketch, explain Hydraulic Drive Quick Return mechanism. 10 **UNIT - III** 5 a. With a neat sketch, give the nomenclature of a Twist drill. 10 b. Explain the following: i) Reaming ii) Counterboring 10 iii) Trepanning iv) Cutting speed of drilling machine v) Machining time in drilling machine. 6 a. With a neat sketch, explain Radial Drilling machine. 10 b. Explain the working principles and constructional features of sensitive drilling machine. 10 **UNIT-IV** 7 a. Name and explain in brief the different elements of a plain milling cutter. 8 b. With a neat sketch, explain Vertical Milling Machine. 6 c. Discuss the following with neat sketches: 6 i) Up milling ii) Down milling 8. Explain different types of Milling operations. 20 UNIT - V 9 a. With a neat block diagram, explain Plain Centre-type grinder. 10 b. Explain: i) Shellac Bonding Process ii) Rubber Bonding Process 10 iii) Silicate Bonding Process iv) Oxychloride Bonding Process. 10 a. Explain the different types of abrasives used. 10

b. Explain in brief, Horizontal, Spindle and Rotating table grinding machine with a neat sketch.

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