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GUJARAT TECHNOLOGICAL UNIVERSITY PDDC - SEMESTER- IV • EXAMINATION - SUMMER 2015

Subject Code: Manufacturing Processes-I Date:28/05/2015 **Subject Name: X41901** Time: 10.30am-01.00pm **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. **Q.1** Explain Plain Indexing and angular indexing with neat sketch 07 Differentiate between gang mailing, straddle milling and string milling with **(b)** 07 sketch Explain wheel designation system in grinding. Draw various grinding wheel **Q.2 07** shapes. Draw operations carried on engine lathe showing feed motion and speed motion. **(b)** 07 Draw twist drill geometry and show all angles on it. 07 0.3 What it is meaning of deep hole drilling? In which application it is being used? 07 Explain methods of deep hole drilling. (b) Classify various machine tools. Write auxiliary motions in manufacturing 07 processes. OR **Q.3** Write function of following lathe machine elements. **07** (a) Tailstock, spindle, end gear train, leadscrew, feed rod, lathe bed, mechanism **07** Write steps in thread cutting in detail and use of chasing dial. **(b)** 0.4 Differentiate between capstan and turret lathe. 07 Differentiate between planer slotter and shaper. Classify shaper machine. **(b)** 07 Write characteristics of metal cutting saw blades. 07 0.4 (a) Draw and explain circular sawing **07 (b) 07 Q.5** (a) Draw various shapes that can be produced using internal broaching. Explain vertical broaching machine. 07 Write short note on attachments extending the process capacitates of shaper Q.5 07 (a) machine. Differentiate between gang drilling and multiple spindle drilling. Differentiate **07** between pit type planer and universal planer.
