

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– III(OLD) EXAMINATION – SUMMER 2019****Subject Code: 131903****Date: 19/06/2019****Subject Name: Manufacturing Process-I****Time : 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Classify machine tools in detail. Explain types of motions in machine tools with examples. **07**
- (b) Draw a block diagram of an Engine Lathe and label all parts of it. **07**
- Q.2** (a) Explain with neat sketch up milling and down milling process. Describe its advantages and limitations. **07**
- (b) Explain Glazing Loading Trueing and Dressing of grinding wheel. **07**
- OR**
- (b) Explain the standard marking system for grinding wheels. **07**
- Q.3** (a) Enlist various alignment tests carried out on Lathe machine to check accuracy level. Describe any two with neat sketch. **07**
- (b) Classify Milling machine. Explain principal parts of Column and Knee type Horizontal Milling machine with neat sketch. **07**
- OR**
- Q.3** (a) Enumerate various milling operations. Explain any three of them with neat sketch. **07**
- (b) Clearly differentiate the Capstan and Turret Lathe. **07**
- Q.4** (a) State comparison of shaper and planer. What are advantages and disadvantages of shaping and planing as compared to other operations **07**
- (b) Draw neat sketch of radial drilling machine and name its parts, explain its working **07**
- OR**
- Q.4** (a) List various types of drilling machine and explain with a neat sketch gang drilling machine. **07**
- (b) Differentiate between open side planer and Standard double housing planer. **07**
- Q.5** (a) Classify Broaching machine. Explain Horizontal Pull Type Broaching machine **07**
- (b) Explain in short: Shaper, Planner and Slotter Machine. In which machine, quick return mechanism is used? Explain it in brief. **07**
- OR**
- Q.5** (a) List the principal types of metal cutting saws. Describe working of reciprocating and circular sawing machine. **07**
- (b) With a neat sketch explain the working of horizontal boring machine stating its advantages and limitations. **07**
