

GUJARAT TECHNOLOGICAL UNIVERSITY**PDDC - SEMESTER-IV • EXAMINATION – SUMMER • 2014****Subject Code: X41901****Date: 17-06-2014****Subject Name: Manufacturing Process-I****Time: 10:30 am - 01:00 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) Differentiate between working and auxiliary motions in various machine tools. **07**
(b) Draw schematic diagram of turret lathe. State the advantages of turret lathe. **07**
- Q.2** (a) Why alignment test is carried out? Explain important alignment features to be tested for lathe. **07**
(b) Explain construction and working of apron mechanism in lathe. **07**
- OR**
- (b) List all types of work holding devices in lathe. Explain any three with diagram. **07**
- Q.3** (a) Differentiate between shaper and planner with schematic diagram. **07**
(b) Explain in brief manufacturing of grinding wheel. **07**
- OR**
- Q.3** (a) Explain working principle of centre less grinding machine. **07**
(b) Explain construction of slotting machine. And its working principle. **07**
- Q.4** (a) List out various milling cutters. Draw any four milling cutters. **07**
(b) Explain in brief gear cutting on milling machine. **07**
- OR**
- Q.4** (a) Draw schematic diagram of radial drilling machine. State applicability of radial drilling machine. **07**
(b) Explain in brief alignment of drilling machine. **07**
- Q.5** (a) Explain construction and working principle of horizontal boring machine. **07**
(b) Explain construction of universal milling machine. **07**
- OR**
- Q.5** (a) Explain working of internal grinder and surface grinder **07**
(b) State advantages and limitation of broaching machine **07**
