

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-III • EXAMINATION – WINTER 2013**

**Subject Code: 133404**

**Date: 03-12-2013**

**Subject Name: Basic Manufacturing Processes**

**Time: 02.30 pm - 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)** Explain the construction and working of apron mechanism in lathe. (07)  
**(b)** Write short note on different types of chucks used in a lathe. (07)

**Q.2 (a)** Explain taper turning operation by swiveling compound rest on lathe machine. (07)  
**(b)** Explain in brief various alignment tests carried out on lathe. (07)

**OR**

**(b)** With neat sketches explain different operations perform with the help of lathe. (07)

**Q.3 (a)** Explain the working principle of hydraulic shaper with neat sketch and describe the functions of its main parts. (07)

**(b)** Explain the construction and working principle of slotting machine giving its applications. (07)

**OR**

**Q.3 (a)** Write classification of milling machine. Explain principal parts of column & knee type horizontal milling machine with neat sketch. (07)

**(b)** Enumerate various milling operations. Explain any three of them with neat sketch. (07)

**Q.4 (a)** What is indexing?. Explain plain indexing method. (07)

**(b)** Explain principal parts of standard planner with neat sketch. Also describe various differences between shaper & planner. (07)

**OR**

**Q.4 (a)** Explain centreless grinding process with neat sketch & standard work feeding methods for centreless grinding with neat sketch. (07)

**(b)** Write a note about grinding wheel parameters influencing the process in brief. Also write standard marking system for grinding wheel with example & mfg. of grinding wheel. (07)

**Q.5 (a)** Enumerate different types of drilling machine. Explain gang drilling machine and multi spindle drilling machine with neat sketch. (07)

**(b)** Enumerate various operations carried out on drilling machine. Explain any four with neat sketch. (07)

**OR**

**Q.5 (a)** Classify drills. Explain nomenclature of twist drill with neat sketch & Write merits of twist drill. (07)

**(b)** Explain the types of planer and their applications with neat sketches. (07)

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