

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 (07)
of its main parts.

(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 (07)
horizontal milling machine with neat sketch.

(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 (07)
differences between shaper & planner.

OR

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

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

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

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

OR

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

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