

GUJARAT TECHNOLOGICAL UNIVERSITY**B.E. Sem-III Remedial Examination March 2010****Subject code:131903****Subject Name: Manufacturing Process-1****Date: 11 /03 /2010****Time: 03.00 pm – 05.30 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 standard marking system for grinding wheels. **07**
(b) What is a mandrel? Explain different types of mandrels. **07**

Q.2 (a) Explain the turret indexing mechanism used in capstan lathe. **07**
(b) Explain up-milling and down-milling. List down the advantage of up-milling. **07**

OR

(b) Derive the formula for machining time calculation for milling. **07**

Q.3 (a) Explain in brief the different milling machine attachments. **07**
(b) List down the advantages and limitations of broaching operation. **07**

OR

Q.3 (a) Explain universal milling machine with neat sketch. **07**
(b) Explain the nomenclature of pull type broach. **07**

Q.4 (a) Explain spring winding, spinning, drilling and tapping operations on lathe. **07**
(b) Explain the primary and auxiliary motions with reference to machine tool. **07**

OR

Q.4 (a) Suggest a method of taper turning of long work pieces and Explain the method. **07**
(b) What are the difference between Engine lathe and Turret lathe? **07**

Q.5 (a) Explain working of hydraulic shaper with neat sketch. **07**
(b) With figure explain the twist drill nomenclature. **07**

OR

Q.5 (a) Explain working of vertical turret lathe. **07**
(b) Differentiate between open side planner and Standard double housing planner. **07**
