

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2018****Subject Code:2152007****Date:27/11/2018****Subject Name:Manufacturing Technology - I****Time: 10:30 AM TO 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) Describe the different functions performed by cutting fluids during machining operations. **03**
(b) Write short note of tapers and taper turning in lathe machine. **04**
(c) Explain single point cutting tool geometry. **07**
- Q.2** (a) Write short note on Apron Mechanism. **03**
(b) Define function of following terms. **I)** head stock **II)** Tailstock **III)** carriage **IV)** feed mechanism **04**
(c) Write short note of following **07**
I) thread cutting **II)** Capstan and Turret Lathe.
- OR**
- (c) Explain different accessories and attachment of lathe. **07**
- Q.3** (a) Explain vertical Boring Machine Operations **03**
(b) Explain gang drill machine.. **04**
(c) Explain Drilling machine operations and also explain drill chucks. **07**
- OR**
- Q.3** (a) Write short note on Radial Drilling Machine. **03**
(b) Describe with neat sketch **04**
(a) Taping (d) Counter Sinking (b) Spot Facing (e) Spring Winding
(c) Spinning
(c) Sketch and describe the twist drill nomenclature. **07**
- Q.4** (a) Explain working principle of Shaper Machine. **03**
(b) Explain band sawing machine with advantages and limitation. **04**
(c) Explain indexing and dividing heads of milling machine. **07**
- OR**
- Q.4** (a) Classification of milling Machine and explain any one with figure. **03**
(b) Explain planer machines with figure. **04**
(c) Discuss and describe quick return mechanism and auto feed mechanism of shaper machine. **07**
- Q.5** (a) Explain Advantages and application of broaching machine. **03**
(b) What is mandrel? Explain any two types of mandrels. **04**
(c) Explain following operations with neat sketches **07**
(a) Honing (b) Buffing (c) Lapping (d) Burnishing
- OR**
- Q.5** (a) Explain Advantages and application of Grinding Wheel. **03**
(b) Explain construction of broaching machine. **04**
(c) Explain of grinding operation with figure. **07**
