

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-VI (NEW) EXAMINATION – WINTER 2020****Subject Code:2161909****Date:27/01/2021****Subject Name:Production Technology****Time:02:00 PM TO 04:00 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) What is the difference between production and manufacturing? **03**
(b) What are crater wear and flank wear? Explain with neat sketch. **04**
(c) Draw and explain Merchant's circle diagram. **07**
- Q.2** (a) What are chip breakers? If they are not used what adverse effects chip can produce on the work, tool and surroundings? **03**
(b) Explain Taylor's tool life equation. **04**
(c) Draw a neat sketch of box jig, indexing jig and channel jig. **07**
- Q.3** (a) Explain Slip and renewable bush. **03**
(b) Explain the essential characteristics and function of cutting fluid. **04**
(c) What is Jamming? Discuss different methods of preventing jamming. **07**
- Q.4** (a) What is meant by fool proofing in the design of a jig? **03**
(b) What is Cutting fluid? Explain in brief Purpose of cutting fluids. **04**
(c) Explain the 3-2-1 locating concept using pins, with suitable sketches. **07**
- Q.5** (a) Classify the types of dies associated with press work. **03**
(b) What are the temperature measurement techniques used in Machining? Explain any one in detail. **04**
(c) Describe methods of reducing cutting forces in press operations. **07**
- Q.6** (a) What is the purpose of shear angle on a punch or die? **03**
(b) Explain the advantages and disadvantages of progressive die. **04**
(c) Explain any four press working operations with sketch. **07**
- Q.7** (a) Why the servo controlled system is needed in EDM process? **03**
(b) Explain in brief: Thread Rolling and Thread Milling **04**
(c) Explain the construction and working principle of Plasma Arc Machining. **07**
- Q.8** (a) Give detailed classification of non-traditional machining processes. **03**
(b) Draw neat sketch of a typical set up for Laser Beam Machining. **04**
(c) Explain with neat diagram construction and working of USM processes. **07**
