

GUJARAT TECHNOLOGICAL UNIVERSITY
BE – SEMESTER – VI (NEW).EXAMINATION – WINTER 2016

Subject Code: 2161909

Date: 25/10/2016

Subject Name: Production Technology

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)** Explain basic principle of EDM with neat sketch. And also discuss desired characteristics required for EDM tool. **07**
- (b)** Explain 3-2-1 location principle with neat sketch. **07**
- Q.2 (a)** Draw the Merchant's circle diagram and derive relation among various forces acting on cutting tool. **07**
- (b)** Explain the various methods of reducing cutting force requirement in press work. **07**
- OR**
- (b)** List the various gear finishing processes and explain any three processes. **07**
- Q.3 (a)** List the various thread manufacturing processes. Explain about thread rolling process. **07**
- (b)** Distinguish between jigs and fixtures. List the design steps for jigs and fixtures. **07**
- OR**
- Q.3 (a)** Explain abrasive jet machining process and discuss various process parameters of AJM. **07**
- (b)** List the desired properties required for good cutting tool material and explain any two cutting tool materials. **07**
- Q.4 (a)** Explain the essential characteristics and function of cutting fluid. **07**
- (b)** What is the meaning of tool life? Briefly explain about various factors affecting on it. **07**
- OR**
- Q.4 (a)** Describe gear hobbing process in detail. **07**
- (b)** Explain about channel jig and box jig with neat sketch. **07**
- Q.5 (a)** Explain blanking and lancing operation with sketch. **07**
- (b)** Briefly explain about regions of heat generation and also explain about various factors affecting cutting temperature. **07**
- OR**
- Q.5 (a)** Classify the die associated with press work and explain about compound die and progressive die. **07**
- (b)** Classify the unconventional machining process and explain about electron beam machining process with neat sketch. **07**
