

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) EXAMINATION – WINTER 2018

Subject Code:2161909

Date:27/11/2018

Subject Name:Production Technology

Time: 02:30 PM TO 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.

		MARKS
Q.1	(a) Draw Single point cutting tool geometry with nomenclatures.	03
	(b) Explain Orthogonal and Oblique Cutting with suitable example	04
	(c) Describe various types of Chips formed during machining process.	07
Q.2	(a) Define cutting tool life and tool wear.	03
	(b) Enlist significance of Rake and clearance angle.	04
	(c) Illustrate Merchant's Circle Diagram along with assumptions.	07
	OR	
	(c) Explain Taylors tool life equation, $VT^n = \text{constant}$	07
Q.3	(a) What is cutting fluid? Explain with suitable example.	03
	(b) Explain characteristics of Cutting Fluid.	04
	(c) Illustrate Locating 3-2-1 principle of Jigs and Fixtures.	07
	OR	
Q.3	(a) Define Clamping device used in Jigs and fixtures.	03
	(b) List out various types of drill bushes and its application.	04
	(c) Explain Box jig and Angle Jig with a neat sketch.	07
Q.4	(a) Give classification of Dies.	03
	(b) Define the terms: Clearance, Piercing, Notching and balnking.	04
	(c) Describe progressive die with suitable sketch along with it application.	07
	OR	
Q.4	(a) Explain cutting action of dies and punch assembly.	03
	(b) Illustrate Strip layout related to press work.	04
	(c) Describe methods of reducing cutting forces in press operations.	07
Q.5	(a) Define; Jig, Fixture and drill bushes.	03
	(b) Differentiate between Die electric fluid and Electrolyte Fluid used in machining process.	04
	(c) Illustrate USM machining process along with its application and disadvantages.	07
	OR	
Q.5	(a) Explain piezoelectric Transducers.	03
	(b) Describe in brief Abrasive Jet Machine.	04
	(c) Explain the principle of ECM machine and discuss its advantages and disadvantages.	07