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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 = 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**

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