

**GOVERNMENT POLYTECHNIC JAIPUR**

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**DEPARTMENT OF PRECISION MANUFACTURING ENGINEERING**

**LESSON PLAN**

<b>Discipline: PME</b>	<b>Semester: 3rd</b>	<b>Name of the Teaching faculty: RANJAN KUMAR PRADHAN</b>	
<b>Subject: JIGS&amp;FIXTURES (TH-5)</b>	<b>No of Days/Week class allotted: 3</b>	<b>Semester from Date: 14/07/25</b>	<b>To Date: 15/11/25</b>
		<b>No of weeks: 15</b>	
<b>Week</b>	<b>Class Day</b>	<b>Topics</b>	
1st	1st	<b>UNIT-1</b>	
		Introduction of the Jigs and Fixtures .	
	2nd	Difference between jigs and fixture	
	3rd	Advantages of jigs and fixture .	
2nd	1st	Define Economy and cost of jig and fixture .	
	2nd	Elements of the Jigs and Fixture .	
	3rd	Define Fool proofing - material used in Jigs and Fixtures	
3rd	1st	Degrees of Freedom .	
	2nd	12 degrees offreedom	
	3rd	6 point location principal or 3-2-1 principle of location	
4th	1st	6point location principle .	
	2nd	3-2-1 principle of location	
	3rd	3-2-1 principle of location	
5th	1st	Essential features of Jigs and Fixtures .	
	2nd	Essential features of Jigs and Fixtures .	
	3rd	<b>CLASS TEST-1</b>	
	1st	General Design principle of jig and fixtures .	
	2nd	General Design principle of jig and fixtures .	
	3rd	Design steps	
7th	1st	Design steps	
	2nd	Common defects of jigs design.	
	3rd	Common defects of jigs design.	
8th	1st	overview of basics of jig and fixtures.	
	2nd	overview of basics of jig and fixtures.	
	3rd	UNIT -2principles of location - locationpoint	
9th	1st	Types of locator -pins and studs	
		V block - cup and cone locationpoints	
	2nd	Adjustable locating ponits -special adjustable stops	
	3rd	special adjustable stops-loation from finished hole in the work	
10th	1st	define Diamond pin locator , cam operated V locator	
	2nd	Quick action ' V ' locator	
	3rd	Six point location of a three legged object .	
	1st	Location of a cylinder on a v- block .	

11th	2nd	Types of clamping lever clamp , hinged clamp ,two way and swinging & wedge clamp
	3rd	Define eccentric clamping arrangement,quick action clamp
12th	1st	Cam operated clam ,quarter turn screw -Toggle clam
	2nd	<b>CLASS TEST-2</b>
	3rd	Pneumatic and hydraulic clams .
13th	1st	Introduction of Washer
	2nd	define C washer - spherical and flat washers.
	3rd	overview principle of location and clamping
14th	1st	overview principle of location and clamping
	2nd	Topic overview of unit 1 and unit 2
	3rd	Topic overview of unit 1 and unit 2
15th	1st	Topic overview of unit 1 and unit 2
	3rd	<b>VST</b>
	4th	<b>VST Question discussion</b>

signature of faculty



