

**R.N.G.PATEL INSTITUTE OF TECHNOLOGY-RNGPIT**  
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**B.Voc. SEMESTER-II, SEMESTER END EXAMINATION – SUMMER 2025**

<b>Subject Code: 1PT201</b>	<b>Date: 15-05-2025</b>
<b>Subject Name: MANUFACTURING PROCESSES</b>	
<b>Time: 11:00 AM to 01:00 PM</b>	<b>Total Marks: 50</b>

**Instructions**

1. It is **compulsory** for students to write **Enrolment No. /Seat No.** on the question paper.
2. Attempt all questions in the question paper.
3. The figures to the right of each question indicate full marks. Make suitable assumptions with proper justification wherever required.
4. Simple, non-programmable scientific calculators are permitted.
5. BL - Bloom's Taxonomy Levels (R-Remember, U-Understanding, A-Application, N-Analyze, E-Evaluate, C-Create), CO - Course Outcomes.

	<b>Marks</b>	<b>BL</b>	<b>CO</b>
<b>Q.1 Multiple-Choice Questions</b>	<b>[05]</b>		
(a) In material removal processes, which of the following is an example?	<b>1</b>	<b>A</b>	<b>1</b>
<div>(i) Casting</div> <div>(ii) Welding</div> <div>(iii) Milling</div> <div>(iv) Extrusion</div>			
(b) What material is commonly used for making patterns in casting?	<b>1</b>	<b>U</b>	<b>2</b>
<div>(i) Plastic</div> <div>(ii) Wax</div> <div>(iii) Wood</div> <div>(iv) All of the above</div>			
(c) In soldering, the filler metal melts at a temperature:	<b>1</b>	<b>R</b>	<b>3</b>
<div>(i) Above the melting point of the base metals.</div> <div>(ii) Below the melting point of the base metals and below 450°C.</div> <div>(iii) Below the melting point of the base metals and above 450°C.</div> <div>(iv) Equal to the melting point of the base metals.</div>			
(d) Rolling is a metal forming process that primarily reduces the thickness of a workpiece by:	<b>1</b>	<b>R</b>	<b>4</b>
<div>(i) Applying tensile forces.</div> <div>(ii) Compressive forces using rotating rolls.</div>			

(iii) Impact forces from a hammer.

(iv) Pulling the material through a die.

(e) What is the primary purpose of the deep drawing process? 1      U      5

(i) To emboss patterns on the metal surface

(ii) To produce hollow and seamless parts

(iii) To trim excess metal

(iv) To bend the edges of a sheet

**Q.2 Attempt Any Three [15]**

(a) Explain the Selection procedure of manufacturing process. 5      R      1

(b) Explain the steps involved in the Core making process. 5      U      2

(c) List out the Types of Furnaces and explain anyone with neat sketch. 5      R      2

(d) List out the Types of Moulding Sand. Explain any two from the special moulding sand. 5      R      2

**Q.3 Attempt Any Three [15]**

(a) Discuss the Essential characteristics of core with its application and material. 5      U      2

(b) Discuss Friction welding with neat sketch and its advantages. 5      R      3

(c) Write a short note on Principle of welding, soldering, Brazing and adhesive bonding. 5      U      3

(d) Explain with neat sketch Laser beam welding. 5      R      3

**Q.4 Attempt Any Three [15]**

(a) Comparison between Hot Rolling and Cold Rolling. 5      U      4

(b) Explain with neat sketch the Tube Drawing process with its applications. 5      R      4

(c) Classify the Forging process and explain anyone of them with neat sketch. 5      R      4

(d) Write down the importance of Coining and embossing operation in Sheet Metal Working. 5      U      5

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