

**GUJARAT TECHNOLOGICAL UNIVERSITY****B.VOC- SEMESTER-II EXAMINATION – SUMMER 2022****Subject Code:21120404****Date:02-08-2022****Subject Name:Basic of Manufacuring Processes****Time:10:30 AM TO 12:30 PM****Total Marks:50****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		<b>Marks</b>
<b>Q.1</b>	(a) Explain single point cutting tool geometry.	<b>05</b>
	(b) Explain types of chips that occur in metal cutting. Why is a built up edge on a tool is undesirable	<b>05</b>
<b>Q.2</b>	(a) Explain spring winding, spinning, drilling and tapping operations on lathe.	<b>05</b>
	(b) Explain difference between capstan & turret lathe.	<b>05</b>
<b>OR</b>		
	(b) Draw simple sketch of engine lathe. List main parts of it and state functions of each part.	<b>05</b>
<b>Q.3</b>	(a) Enumerate various operations carried out on drilling machine. Explain any four with neat sketch.	<b>05</b>
	(b) With figure explain the twist drill nomenclature.	<b>05</b>
<b>OR</b>		
<b>Q.3</b>	(a) Draw neat sketch of radial drilling machine and name its parts, explain its working	<b>05</b>
	(b) By drawing neat sketches explain following operations which are performed. On drilling machine : (1) Counter boring (2) Counter sinking (3) Spot-facing (4) Trepanning, (5) Knurling	<b>05</b>
<b>Q.4</b>	(a) Define the term pattern. List out the materials commonly used for pattern.	<b>05</b>
	(b) List the essential properties of moulding sand. State the effect of each properties on casting.	<b>05</b>
<b>OR</b>		
<b>Q.4</b>	(a) Explain the terminology used in casting with neat sketch.	<b>05</b>
	(b) Explain investment casting process. State its advantages and applications	<b>05</b>
<b>Q.5</b>	(a) Classify metal joining processes.	<b>05</b>
	(b) Explain the principle of gas welding process with its advantages and limitations.	<b>05</b>
<b>OR</b>		
<b>Q.5</b>	(a) Discuss with neat sketch TIG welding process. State its advantages, limitations and applications	<b>05</b>
	(b) Explain the principle of seam welding process with its advantages and limitations.	<b>05</b>

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