

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – WINTER 2018****Subject Code:2162508****Date:20/11/2018****Subject Name: Metal Forming 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) Discuss in brief about flow stresses in metal forming process.	03
	(b) Define: 1) Slip and 2) Yield criteria	04
	(c) Distinguish between hot and cold working processes in detail.	07
Q.2	(a) Mention some of the advantages of forming processes.	03
	(b) Describe different types of defects of rolling process with sketch.	04
	(c) Explain the pipe and tube manufacturing by rolling process with sketch.	07
OR		
	(c) Define semi-hot working process. Also discuss about its effects on mechanical properties.	07
Q.3	(a) Explain working of planetary rolling mill with sketch.	03
	(b) Discuss the principle of cold heading process.	04
	(c) Classify Extrusion processes. Explain Impact extrusion process.	07
OR		
Q.3	(a) Explain three high rolling mill with sketch.	03
	(b) Mention some of the advantages of forging over casting process.	04
	(c) Explain the piercing method of pipe and tube manufacturing by extrusion.	07
Q.4	(a) Write a short note on forging defects.	03
	(b) Mention some of the applications of extrusion process	04
	(c) Depict the principle of Hydrostatic Extrusion process.	07
OR		
Q.4	(a) Explain Rotary Swaging process.	03
	(b) Differentiate between coining and embossing process.	04
	(c) Describe the process of wire drawing in detail.	07
Q.5	(a) Define open and closed die forging process.	03
	(b) Give details about the deep drawing process with sketch.	04
	(c) Explain tube drawing process with a moving mandrel method.	07
OR		
Q.5	(a) Distinguish between blanking and piercing.	03
	(b) Give a brief idea about V-bending process.	04
	(c) Explain High-Energy Rate Forming and HVF process.	07
