Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-VII(NEW) • EXAMINATION – WINTER 2016

Subject Code:2172108 Subject Name:Metal Working Processes Time:10.30 AM to 1.00 PM Instructions: Date:23/11/20 Total Marks:			Date:23/11/2016	
		0		
1110	1.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a)	Define extrusion and classify extrusion processes. Discuss role of lubricant in extrusion.	07	
	(b)	Differentiate between hot working and cold working.	07	
Q.2	(a) (b)	Discuss recrystallization and factors affecting it. Classify metal working processes and discuss effect of strain rate. OR	07 07	
	(b)	With causes and remedies discuss rolling defects.	07	
Q.3	(a) (b)	Which are variables that affect rolling process? Discuss them. With neat sketch explain different forging operations. OR	07 07	
Q.3	(a) (b)	Write brief note on shearing and deep drawing processes of sheet metal working. Discuss variables in wire drawing process.	07 07	
Q.4	(a) (b)	Derive equation for calculation of forging load. Explain the flow stress analysis of die in extrusion and suggest suitable die design.	07 07	
Q.4	(a)	OR Derive forces and geometrical relationship in rolling process.	07	
Ų.Ŧ	(a) (b)	Explain forging defects with their causes and remedies.	07	
Q.5	(a) (b)	Discuss process of hydrostatic extrusion. Discuss defects in wire drawing process. OR	07 07	

Define or explain: i. plate, ii. Bloom, iii. Billet, iv. Slab, v. sheet, vi. Strip, vii.

Q.5

(a)

(b)

Contact angle.

Write short note on workability.

07

07