Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-III EXAMINATION – SUMMER 2016

Subject Code:132103 Subject Name:Mineral Processing Time:10:30 AM to 01:00 PM Instructions:		Code:132103 Date:27/05/201	Date:27/05/2016 Total Marks: 70	
		0:30 AM to 01:00 PM Total Marks: 'ons:		
	2.	Attempt all questions.Make suitable assumptions wherever necessary.Figures to the right indicate full marks.		
Q.1	(a)	Give detail classification of crushers. Draw a simplified diagram of Jaw Crusher showing different parts.	07	
	(b)	Explain the term "Liberation" and it's significant in Mineral Processing.	07	
Q.2	(a)	What are the advantages of mineral processing .Draw a simplified flow sheet for the various stages involved in Mineral processing.	07	
	(b)	Define Ore and Mineral. Give physical and chemical characteristics of metal like Iron, Copper, Aluminium, Zinc, lead. OR	07	
	(b)	Explain motion of charge in Tumbling mill and derive the equation of critical speed.	07	
Q.3	(a)	What is screening? Which factors affect the screening efficiency? Classify different types of industrial screening.	07	
	(b)	What is classification. Draw a chart showing different types of classifiers and explain any one of it.	07	
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Q.3	(a) (b)	Write short note on Jigging machine. Explain Heavy media separation in brief.	07 07	
Q.4	(a) (b)	What is free settling ratio? Derive the equation for it as per Newton's law. Write short note on Sedimentation and Thickening OR	07 07	
Q.4	(a) (b)	Explain with diagram Dry-Drum magnetic separator and explain it. Write brief note on Froth Floatation.	07 07	
Q.5	(a) (b)	Discuss about electrostatic separators. What are the purpose of collector, frother, activator and depressant in flotation process?	07 07	
Q.5	(a)	OR Explain in brief 'Dense Media Separation'. Describe different media employed	07	
	(b)	for the operation with examples. Explain about sieve analysis.	07	
