Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII EXAMINATION - WINTER 2015

Subject Code: 172204 Subject Name: Mineral Processing Time: 10:30am to 1:00pm Instructions:			Date:16/12/2015 Total Marks: 70	
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Q.1	(a)	What mineral properties help in their separation? What are the techniques used separation?	07	
	(b)	Write characteristics of Jaw crusher with generalized section figure.	07	
Q.2	(a) (b)	Explain ball mill? Classify the various zones created in ball mill during grinding. Explain Stationary screen & Vibrating screen. OR	07 07	
	(b)	Short note on Froth flotation.	07	
Q.3	(a)	Explain the principle of mechanical classifier. List out the types and explain in brief any one mechanical classifier.	07	
	(b)	Discuss the factors affecting the operation of grinding mills in brief. What do you understand by 'Open Circuit' & 'Closed Circuit' grinding? OR	07	
Q.3	(a)	Derive equation showing 'Terminal Velocity' dependence on small spherical particle size & densities of particle & fluid under free settling conditions.	07	
	(b)	i) Draw the flow sheet of iron ores.ii) Explain kick's law of comminution.	05 02	
Q.4	(a) (b)	Explain Hindered settling, Consolidation trickling & Differential acceleration. Write merits of mineral processing.	07 07	
Q.4	(a)	OR Draw simplifies flow sheets for PbS ore.	07	
V. -T	(b)	Explain the drying and dewatering process for coal.	07	
Q.5	(a) (b)	Explain Electrostatic separation. What is importance of Sampling? What are different methods used for sampling in mineral processing.	07 07	
Q.5	(a) (b)	OR Explain Heavy media separation in brief Write short note on Thickening.	07 07	
