Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER– VII• EXAMINATION–SUMMER 2015

Subject Code: 172204 **Date: 04/05/2015**

Subject Name: Mineral Processing

Time: 2.30pm-5.00pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Explain the mineral processing by flow sheet. Define terminology like ore, mineral and middling	**07**
	(b	Explain ball mill? Classify the various zones created in ball mill during grinding.	**07**
Q.2	**(a)**	Give classification of crusher. Briefly discuss characteristics of Jaw crusher .	**07**
	(b	Draw flow sheet of beneficiation for bituminous coal.	**07**
		OR	
	(b	Draw a simplified flow sheet of beneficiation of lead-zinc ore.	**07**
Q.3	**(a)**	What is sizing? What are the different methods of sizing used in laboratory?	**07**
	(b	Explain the forth-flotation method used in mineral processing	**07**
		OR	
Q.3	**(a)**	Draw simplified flow sheet for concentration of Copper Sulphide ore.	**07**
	(b	What is screening? Give different types of screens in detail.	**07**
Q.4	**(a)**	Write note on Jigging process.	**07**
	(b	Write about different types of clasiffiers? Explain any one mechanical classifier	**07**
		OR	
Q.4	**(a)**	Short note on heavy media seperatrion.	**07**
	(b	What is magnetic separation? Which are the materials usually separable by magnetic separation?	**07**
Q.5	**(a)**	Explain the drying and dewatering process for coal.	**07**
	(b	What is comminution & its objectives ? Give different stages of size reduction with size ranges.	**07**
		OR	
Q.5	**(a)**	What is Thickening process ? Draw a simplified diagram showing common features of a conventional thickener .	**07**
	(b	Explain briefly on electrostatic separator.	**07**

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