Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII(OLD) • EXAMINATION – WINTER 2016

Subject Code: 172201 **Date: 29/11/2016**

Subject Name: Mine Planning

Time: 10:30 AM to 01:00 PM **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)**	What is mine planning? What are the components of mine planning?	**07**
	(b)	Explain the various methods of reserve estimation.	**07**
Q.2	**(a)**	Explain various types of a feasibility report of a mine metallic mineral.	**07**
	(b)	Explain Bench Geometry and its layout with illustrative diagram.	**07**
		OR	
	(b)	Write a short note on Taylor's mine life rule.	**07**
Q.3	**(a)**	Describe parameters affecting design of haul road.	**07**
	(b)	Explain mining system & sub-system in underground mine planning.	**07**
		OR	
Q.3	**(a)**	What is advantage & disadvantage of underground mine working.	**07**
	(b)	Which are the challenges posed in mine planning?	**07**
Q.4	**(a)**	What is cut-off Grade? How do you determine the cut-off grade for copper ore?	**07**
	(b)	Write a note on rate of production and mining losses.	**07**
		OR	
Q.4	**(a)**	Describe Grade tonnage curve and mining recovery.	**07**
	(b)	Explain following words (1) Losses and Dilution (2) Mine Optimization	**07**
Q.5	**(a)**	What is ultimate pit limit and illustrate in schematic diagram a design Procedure in open pit mine with regard to ultimate pit limit determination?	**07**
	(b)	Describe factors considered in dump planning.	**07**
		OR	
Q.5	**(a)**	Explain the various advantages of open cast mine working.	**07**
	(b)	Define the following terms: (1) Bench height (2) Bench width (3) Face angle (4) Bench face (5) stripping ratio (6) break even stripping ratio (7) toe.	**07**

****