

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-IV(NEW) – EXAMINATION – SUMMER 2019**

**Subject Code:2142206**

**Date:25/05/2019**

**Subject Name: Surface Mine Production**

**Time:02:30 PM TO 05:00 PM**

**Total Marks: 70**

**Instructions:**

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

		MARKS
<b>Q.1</b>	(a) Define the following term: Bench Height, Bench Width and Slope Angle.	<b>03</b>
	(b) Differentiate between the overall pit slope angle and ultimate pit slope angle.	<b>04</b>
	(c) Write the advantages and disadvantages of surface mining.	<b>07</b>
<b>Q.2</b>	(a) Enlist the different types of shovel. Explain any one.	<b>03</b>
	(b) Explain the overcasting by dragline.	<b>04</b>
	(c) Discuss factors influencing selection and characteristics of surface mining methods.	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(c) Describe the stages of life of surface mine.	<b>07</b>
	(a) Write the application of pipe line transportation.	<b>03</b>
	(b) Write a short note on the Ripper.	<b>04</b>
	(c) Explain plaster shooting and pop shooting.	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) Draw a table which describes the different shovel-dumper combinations with respect to minimum production/day.	<b>03</b>
	(b) Write a short note on the Grader.	<b>04</b>
	(c) What is blasting? Explain secondary blasting in brief.	<b>07</b>
<b>Q.4</b>	(a) Write short note on different drainage patterns.	<b>03</b>
	(b) Write a short note on the Bull dozer.	<b>04</b>
	(c) What do you mean by overcasting? Explain the overcasting by blasting with neat sketch.	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) List the different types of slope failures. Explain any one.	<b>03</b>
	(b) Write a short note on the Scraper.	<b>04</b>
	(c) Explain different types of drilling patterns used in surface mining.	<b>07</b>
<b>Q.5</b>	(a) Write a short note on Power shovel.	<b>03</b>
	(b) Draw a flow chart of different operations of open cast mining.	<b>04</b>
	(c) Describe the criteria for selection and performance of different types of drilling equipments.	<b>07</b>
<b>OR</b>		
<b>Q.5</b>	(a) Write a short note on Front end loaders.	<b>03</b>
	(b) Explain the multi row blasting with neat sketch.	<b>04</b>
	(c) Explain the major operations that take place in surface mining.	<b>07</b>

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