

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER– IV (New) EXAMINATION – WINTER 2019

Subject Code: 2142206

Date: 16/12/2019

Subject Name: Surface Mine Production

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.

		MARKS
Q.1	(a) Draw a flow diagram of mineral extraction & mineral transportation in open cast mining	03
	(b) Explain operation and maintenance of shovel.	04
	(c) Enlist the different types of slope failures. Explain any one.	07
Q.2	(a) How slope stability is protected and monitored?	03
	(b) Differentiate between opencast mines and underground mines.	04
	(c) Evaluate the types of transport system in open cast mining.	07
	OR	
	(c) Evaluate different types of drilling equipments used in mining.	07
Q.3	(a) What is blasting? Explain primary and secondary blasting	03
	(b) What are the drainage requirements in surface mining?	04
	(c) List out the open cast mining machinery	07
	OR	
Q.3	(a) Define the terms associated with surface mining.	03
	(b) Describe haulage track, its laying method and maintenance procedure.	04
	(c) Explain spreaders and reclaimers.	07
Q.4	(a) explain the terms bench, bench height, bench width, cut and face angle.	03
	(b) Write a note on width and height of the bench with illustrative diagram	04
	(c) What is stripping ratio? How it will help in determining choice of mining?	07
	OR	
Q.4	(a) Explain major operation in surface mining.	03
	(b) Describe merits and limitations of open cast mining.	04
	(c) Explain the factors affecting the choice of a transport system in opencast mining.	07
Q.5	(a) Point out the comparison between diesel shovel and electrical shovel	03
	(b) What is Reclamation? Explain land reclamation.	04
	(c) Give the machinery used in ground preparation and explain any two.	07
	OR	
Q.5	(a) Give the points to deploy a dragline in the surface mining	03
	(b) List out types of reclaimer for reclaiming the material and explain bucket wheel reclaimer with its neat sketch.	04
	(c) Explain overcasting by Dragline with its various methods	07

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