Seat No.:	Envolment No
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GUJARAT TECHNOLOGICAL UNIVERSITY

Diploma Engineering - SEMESTER-II • EXAMINATION – SUMMER 2013

Subject Code: 320013	Date: 21-06-201	13
Subject Name: Mechanical C Time: 2:30 pm - 05:00 pm	Operation (CEO – I) Total Marks: 7	70
Instructions: 1. Attempt any five question 2. Make suitable assumptio 3. Figures to the right indic 4. English version is consider	ns wherever necessary. ate full marks.	
Q:1 (a) Differentiate unit operation	<u> -</u>	07
(b) Classify size reduction equi	3	07
- · · · ·	surface area, volume surface mean diameter, mass	
Mean diameter.		07
(b) Write a note on types of scr	•	07
	OR	
- · · ·	d to crush 100 tons of lime stone (work index 12.7	
<u> </u>	a screen opening 50 mm and 80% of product pass	
through screen opening 3 m Q:3 (a) Describe the crushing laws		07 07
(b) Explain plate and frame filt		07
(b) Explain place and frame int	OR	07
Q:3 (a) Explain theory of batch sedi	-	07
(b) Discuss principle, construction and working of cyclone separator.		07
Q:4 (a) What are the advantages and dis –advantages of centrifuge over filter press.		07
- · · · · · · · · · · · · · · · · · · ·	on and constant pressure filtration. OR	07
Q:4 (a) Explain methods of vortex p	prevention.	07
(b) Explain agitation vessel wit	h principle, working and construction.	07
Q:5 (a) Write a note on electrostatic precipitator.		07
(b) Explain banbury mixture.		07
	OR	
Q:5 (a) Derive an expression for po		07
	and sample by testing sieves, the following	
Observation were recorded.	. 1	
1 0 1	ial retained(gms)	
	.0 8 00	
	8.00 9.00	
	6.00	
	7.00	
	e area and volume surface mean diameter for this	
*	particles=2.65, Sphericity Qs=0.571.	07
