Seat No.: Enrolment No
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## GUJARAT TECHNOLOGICAL UNIVERSITY

**BE - SEMESTER-V EXAMINATION – WINTER 2015** 

Subject Code: 2153615  Subject Name: Processing of Glass & Ceramics Time: 10:30am to 1:00pm Instructions:  Date:14/12  Total Mark				
Q.1	(a)	Explain the terms: Slip casting, hot isostatic pressing, extrusion.	07	
	<b>(b)</b>	What is Base exchange capacity? Explain Dust Pressing. Discuss Pressing equipments required for Whiteware Industries.	02+03+02	
Q.2	(a) (b)	Explain Deflocculation and Flocculation. Discuss Slip Casting with diagram.	04+03 07	
OR				
	<b>(b)</b>	What are the various polymorphs of silica? What is Flint? Explain the formation of silica network.	02+02+03	
Q.3	(a)	What are the requirements for mould selection in Slip casting? What is Pressure casting?	02+05	
	<b>(b)</b>	Describe the terms: Injection moulding, Reactive hot pressing, turning.	07	
OR				
Q.3	(a)	Define whiteware bodies. Give its applications.	03+04	
	<b>(b)</b>	Describe the behavior of silicate melt and borate melt.	07	
Q.4	(a) (b)	Describe drying defects encountered in ceramicwares during drying.  Explain in detail: refining of melt and homogenizing of melt.  OR	07 04+03	
Q.4	(a)	What is natural magnesite? Why does it have low hydration resistance? How can the hydration resistance of magnesite be improved?	02+02+03	
	<b>(b)</b>	What is Sea Water Magnesia? How is it synthesized?	07	
Q.5	(a)	Describe in detail various physicochemical changes that occur when clay is heated.	07	
	<b>(b)</b>	Describe the modus operandi of tunnel kiln in detail.  OR	03+04	
Q.5	(a) (b)	Define glass. Explain the plot of specific volume vs. Temperature Why annealing is required in glass making? Discuss difference between annealing and toughening.  ***********************************	02+05 02+02+03	