St. Francis Institute of Technology (Engg. College)

Internal Assessment Test-II

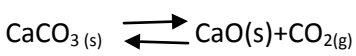
Academic Year: 2017-2018

Branch: FE ALL	Year: FE SEM I
Subject: APPLIED CHEMISTRY I	Time: 2:00-3:00 PM
Date: 16/10/17	No. of Pages: 02
Marks: 15 Marks	

Instructions: Candidates should read carefully the instructions printed on the question paper and on the cover of the Answer Book, which is provided for their use.

Note the following instructions.

1. All questions are compulsory.
2. Draw neat diagrams wherever necessary.
3. Write everything in ink (no pencil) only.
4. Assume data, if missing, with justification.

Q.1.	**Attempt any five.**	(1*5)
a.	Give any four differences between thermosetting and thermoplastic polymers.	1M
b.	Write the role of 1) Lubricant 2) Plasticizers in compounding of plastics.	1M
c.	Define Glass transition temperature. Write two factors affecting it.	1M
d.	Give the preparation of Plexiglass.	1M
e.	Define tacticity.Write its types.	1M
f.	Write two merits and demerits of phase rule.	1M
g.	Define Eutectic Mixture. Give one example.	1 M
Q.2. a.	Explain water system and find the degree of freedom for areas, curves and point.	(1+2)M
b.	Write the conditions for polymer to become conductive in nature, give two examples.	2 M
	OR	
c.	Give preparation, properties and uses of Bakelite.	3M
d.	Define Gibbs phase rule. Find out the degree of freedom of the following system: 	2M
Q.3.a.	List any four drawbacks of natural rubber? Explain vulcanization process with reaction.	3M

b.	What is reduced phase rule? When is it used?	2M
	OR	
c.	Explain with diagram the moulding process used for thermosetting polymers only.	3M
d.	Mention any two characteristics of polymers used in medical field? Give 2 examples with applications.	2M