

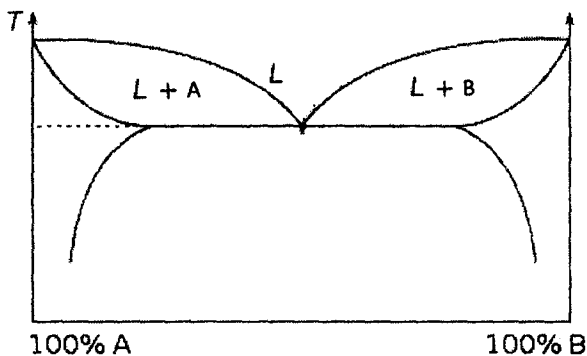
BENGAL ENGINEERING AND SCIENCE UNIVERSITY, SHIBPUR
B.E. 5TH SEMESTER (MET) FINAL EXAMINATION, 2013
Polymers and Refractories Technology (CH-501)

Full Marks: 35

Time: 2 hrs

Answer any five questions

1. Write note on glass transition temperature. How is it important? What are the important structural features that affect?
[3+2+2]
2. What is Conducting polymer ? Write note on different types of Conducting polymers and mention its uses.
[1+4+2]
3. Write application and the sequence of reactions involved in the preparation of
(i) Poly (Hexamethylene Adipamide) from cyclohexanone.
(ii) Polyimides from Aromatic diamine.
[3½+3½]
4. (a) What do you mean by apparent and true porosity of refractories?
(b) Describe boiling point method for determination of porosity of refractories. [3+4]
5. (a) What is refractoriness? What do you mean by pyrometric-cone test or seger-cone test?
(b) Write short notes on thermal spalling and thermal conductivity of refractories?
[1+2+2+2]
6. (a) Define eutectic composition, point and temperature from the given phase diagram.



A and B are the two component
L is liquid phase

- (b) Classify refractories with examples based on their chemical nature.

[4+3]