

IV B.Tech I Semester Supplementary Examinations, November 2005
CERAMICS AND COMPOSITE MATERIALS
(Metallurgy & Material Technology)

Time: 3 hours**Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Give a brief classification of ceramics.
(b) Discuss in detail about MgO-Al₂O₃ system.
(c) Write short notes on imperfections in ceramics. [4+8+4]
2. Describe in detail about insulating materials and earthenware materials. [16]
3. Write a brief account on:
 - (a) Stone ware
 - (b) Oven ware
 - (c) China ware
 - (d) Porcelain [4x4=16]
4. (a) What are advanced ceramics . Describe them in detail.
(b) Classify refractories. What are the various required properties. Discuss them. [8+8]
5. (a) Describe the dispersion strengthened composite materials.
(b) Describe carbon fibre reinforced polymer composites. [8+8]
6. (a) What are the influences of fibre length , fibre orientation and composition on fibre reinforced composites.
(b) Explain the processing of Fibre reinforced composites. [6+10]
7. Write clearly about :
 - (a) Metal ceramic mixtures.
 - (b) Particle reinforced materials. [8+8]
8. Write short notes on :
 - (a) Boron and graphite composites
 - (b) Non-oxide ceramics
 - (c) Glass fibre reinforced composites
 - (d) Al-SiC particulate composites. [4x4=16]
