

T E - sem - VI (CBSEs) chemical - Adv. Material
Advance Material

QP Code : 717700

27/12/16

(3 Hrs)

Mark : 80

- N. B.
- 1 Question No. 1 is compulsory
 - 2 Attempt any three questions from remaining five questions
 - 3 Assume suitable data if necessary
 - 4 Diagram at appropriate places carries marks

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- 1
 - (a) Discuss the characteristics of Titanium that makes it attractive for certain engineering applications. Also give its limitations. 5
 - (b) Explain the mechanisms by which high strength and creep resistance are achieved Co based alloys? 5
 - (c) Write note on liquid crystal polymer. 5
 - (d) Define composite. Discuss properties & applications of ceramic matrix composites. 5
- 2
 - (a) What is sensitization? Discuss how Inter Granular corrosion is harmful for stainless steel. Suggest the methods to minimize it. 12
 - (b) Explain biomedical application of polymer in detail? 8
- 3
 - (a) Define ferroelectricity. Discuss the working of ferroelectric ceramic materials. 10
 - (b) Explain Silica Carbide Processing of ceramics? 10
- 4
 - (a) Explain reinforcement mechanism for composites? 10
 - (b) Explain carbon composite fabrication method? 10
- 5
 - (a) Discuss properties & applications of ceramic matrix composites. 10
 - (b) Discuss properties & applications of metal composites. 10
- 6
 - (a) Explain in detail assembly methods? 10
 - (b) Explain in details diffusion process for thin film coating? 10