

QP Code : 6497

(3Hours)

Marks 80

- N.B : 1) Question no1 is compulsory.
 2) Answer Any Three of the Remaining Questions.
 3) Illustrate the answer with proper and neat diagram wherever necessary.

- Q1) a) Explain cryogenic behavior of stainless steel material (5)
 b) Explain preparation of Vectra along with its properties and application. (5)
 c) Explain biomedical application of PTFE. (5)
 d) Write uses of Sialons. (5)
- Q2) a) Explain different causes of failure in stainless steel (10)
 b) Explain diffusion bonding method for fabrication of metal matrix composites (10)
- Q3) a) Explain chemical vapor infiltration process for fabrication of ceramic matrix composites (10)
 b) What is closed molding? Explain sheet Molding compound process. (10)
- Q4) a) Explain chemical vapor deposition method for synthesis of Carbon Nanotubes (10)
 b) Explain silicates structures in ceramic (10)
- Q5) a) What are composites? Explain classification of composites material. (10)
 b) Explain hardfacing process for thin film coating (10)
- Q6) Write Short note on (any Four) (20)
 a) High temperature alloy
 b) Ferroelectric behavior of ceramics
 c) Advantages and disadvantages of Composites
 d) Shape memory alloy
 e) High pressure processing of Carbon -Carbon composites.