

Roll No.

Total No. of Pages : 01

Total No. of Questions : 08

M.Tech (EE)EL-IV/(Electrical Power System)OE/(Power System)/ECE(Wireless Communication)OE (2018 Batch) (Sem.-3)

COST COMPOSITE MATERIALS

Subject Code : MTOE-301E-18

M.Code : 76547

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWELVE marks.

1. Discuss the advantages of composites over metals or alloys. Explain the advantages and drawbacks of metal matrix composites over polymer matrix composites.
2. Write a note on the following :
 - a) Maximum strain criterion
 - b) Stress concentrations
3. Discuss in detail the preparation procedure, properties and applications of Kevlar fibers.
4. Explain the working principle of manufacturing metal matrix composites by solid state diffusion technique. Also give its properties and applications.
5. Elaborate diagrammatically the working principle of manufacturing polymer matrix composites by compression molding method. State its properties and applications.
6. Explain the following :
 - a) Isostrain and Isostress conditions
 - b) Inverse rule of mixtures
7. Discuss in detail the effect of size, shape and distribution on the composite performance.
8. Elaborate the working principle of braiding technique for manufacturing carbon composites. Also give the product applications.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.