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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(AE) (2011 Onwards) (Sem.-3)

AUTOMOTIVE MATERIALS

Subject Code : BTAE-305

Paper ID : [A1155]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

I. Write short notes on :

- (a) Define Carbon Steel.
- (b) List out the uses of Glass.
- (c) Define Elastomers.
- (d) Define Thermoplastics.
- (e) What are Composites?
- (f) Define Resins.
- (g) Explain Oxide Ceramics.
- (h) What is Chemical Hardening?
- (i) What is Corrosion?
- (j) What is Recrystallization?

SECTION-B

2. Explain electroplating with examples.
3. Discuss the hot isostatic pressing in detail.
4. What is effect of alloying elements on the properties of steel? Discuss.
5. What is the difference between polymer matrix composites and metal matrix composites?
6. Explain the composition and structure of glass. Write down the types of glass.

SECTION-C

7. What are Carbon Composites? Discuss its advantages and disadvantages in detail.
8. What are Ceramic Materials? Explain its nature, types and properties.
9. What is Treatment? Explain heat treatment and surface treatment in details with present applications.