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Total No. of Pages: 02
Total No. of Questions: 09

B.Tech.(AE) (Sem.-3rd)
AUTOMOTIVE MATERIALS
Subject Code: BTAE-305
Paper ID: [A1155]

Time: 3 Hrs.**Max. Marks:60****INSTRUCTIONS TO CANDIDATE:**

1. *Section-A is **compulsory**. Consisting of **ten** questions carrying **two** marks each.*
2. *Section-B contains **five** questions carrying **five** marks each and student has to attempt any **four** questions.*
3. *Section-C contains **three** questions carrying **ten** marks each and student has to attempt any **two** questions.*

SECTION-A (Compulsory)**(2x10=20)**

Q.1. Write briefly:

- a. How engineering materials are classified?
- b. What are plastics?
- c. What is the range of composition of alloy steel?
- d. What are types of ceramic materials?
- e. What is normalizing?
- f. What are refractory materials?
- g. What are elastomers?
- h. How composites are classified?
- i) What is chemical hardening?
- j) What do you understand by anodizing?

SECTION - B**5x4=20**

- Q.2. Discuss the properties of alloys of copper and write their applications.
- Q.3. How recrystallization temperature effect the properties of material? Discuss.
- Q.4. What are different types of glass? Discuss their properties.
- Q.5. Discuss the characteristics of rubber.
- Q.6. Discuss the criteria for selection of material for connecting rod.

SECTION - C

10x2=20

- Q.7. What is a polymer? How does the structure of polymer differ from that of a metal? Discuss.
- Q.8. What are the mechanical properties of material and how are they related to one another? Discuss.
- Q.9. Write a note thermal spraying.

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