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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ANE) (Sem.-4)

AIRCRAFT MATERIALS AND PROCESSES

Subject Code : ANE-207

Paper ID : [A1032]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS 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 have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A**1. Answer briefly :**

- a) Define Brittleness.
- b) Define tempering.
- c) Define high carbon steel.
- d) Define 18-8 Steel.
- e) Define Cycle Annealing.
- f) What are nimonic alloys?
- g) Define Pure Clad.
- h) What is Brazing?
- i) Classify Corrosion-resisting steels.
- j) Define Fibrous composites.

SECTION-B

2. Discuss the effect of adding following elements on the properties of alloy steels.
 - a) Chromium
 - b) Molybdenum
 - c) Phosphorous
3. Discuss SAE steel numbering system giving at least three examples.
4. Discuss following with reference to steels :
 - a) Austempering
 - b) Martempering
5. Discuss inter granular Corrosion steel in details.
6. Discuss heat treatment of aluminum alloys.

SECTION-C

7. Describe theory of heat treatment with the help of iron-carbon diagram with reference to steels.
8. Write the procedure for the manufacture of Titanium with the help of a flow chart.
9. Discuss particulate composites in details.