

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(Aerospace Engg.) (2012 Onwards) (Sem.-5)

**AEROSPACE MATERIALS**

Subject Code : ASPE-302

Paper ID : [A2928]

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 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**

**Q1 Answer briefly :**

1. Why every gram counts in aviation?
2. Name the various magnesium alloys used in aircrafts.
3. What are the properties of carbon steel?
4. Name the various high corrosion alloys.
5. Classify the steel alloys.
6. What is resistance welding? Give example.
7. What are the characteristics of composite materials?
8. What do you mean by reinforcement?
9. Explain closed mould process.
10. Describe process of injection moulding.

**SECTION-B**

- Q2 What are the factors affecting choice of materials?
- Q3 What are the properties of magnesium alloys?
- Q4 Describe the various heat treatment processes for Aluminum.
- Q5 What are the uses of Inconel, Monel & K-Monel alloys?
- Q6 What are the different riveting methods for aircrafts?

**SECTION-C**

- Q7 Describe the properties and types of Reinforcement and Matrix materials.
- Q8 Explain moulding, layup and curing processes. What is bag moulding and its applications?
- Q9 Describe the use of various materials in aircraft industries with proper applications.

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