

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Sc. (Hons) Aircraft Maintenance (Sem.-3)

AIRCRAFT MATERIALS AND HARDWARE

Subject Code : BSCARM-302-18

M.Code : 76600

Date of Examination : 19-12-22

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. Write briefly :**
- a) Annealing and Tempering
 - b) Rockwell hardness test
 - c) SAE numbering with example
 - d) Nickel alloys with examples
 - e) Composite structures
 - f) Self-tapping screws and dowels
 - g) Tab and spring washers
 - h) Quick release fasteners
 - i) Non-metallic materials
 - j) Blind rivets.

SECTION-B

2. Explain the international standards for bolts.
3. Explain the various types of defects in fabric.
4. Explain how various types of rivets are heat treated?
5. Explain various types of studs along with their use.
6. Explain how do you preserve and maintain wooden structures.

SECTION-C

7. Explain various methods employed for detection of defects/deterioration in composite and non-metallic materials.
8. Explain how the following alloying elements affect the properties of steel:
 - a) Carbon
 - b) Manganese
 - c) Silicon
 - d) Sulfur
 - e) Phosphorus.
9. Explain various types of riveted joints with the help of neat sketches. How inspection of riveted joints is carried out?

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.