

733**October 2018***Time – Three hours*
(Maximum Marks: 75)

[N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory. Answer any FOUR questions from the remaining in each PART – A and PART – B

(2) Answer division (a) or division (b) of each question in PART – C.

(3) Each question carries 2 marks in PART – A, 3 marks in Part – B and 10 marks in PART – C.]

PART – A

1. What is tensile strength?
2. What is the use of composite materials in aircraft structures?
3. List any three bolt types.
4. What is riveting process?
5. What is fatigue strength?
6. What is the difference between sealing and boundary agents?
7. What are fasteners?
8. What are the types of fabrics?

PART – B

9. What are the types of composite materials used in aircraft?
10. State the characteristics of fabrics used in aircraft.
11. What is self tapping screws?
12. Name the different modes of failure of a riveted joint.
13. Define impact resistance.
14. What are the types of defects in wooden structures?
15. Define self locking nuts.
16. What are the tools used for riveting?

[Turn over.....]

PART - C

17. (a) Briefly explain about the testing of ferrous materials for hardness and tensile strength.
(Or)
(b) Explain the properties and identification of non-ferrous materials used in aircraft.
18. (a) List out the types of defects in composite. Explain any one defect repair method.
(Or)
(b) Explain about the construction methods of wooden airframe structures.
19. (a) List out the types of defects in fabric. Explain any one inspection method for fabric.
(Or)
(b) Briefly explain about the environmental condition inspection method.
20. (a) Explain about rivet spacing and pitch.
(Or)
(b) List out the types of rivets. Explain any two types of rivets.
21. (a) Briefly explain the types of bolts and nuts used in aircraft.
(Or)
(b) List out the types of studs. Explain about any two types of studs.
