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Question Paper Code : 40039

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2021.

Seventh Semester

Aeronautical Engineering

AE 8009 – AIRFRAME MAINTENANCE AND REPAIR

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Differentiate between soldering and brazing.
2. Define welding jigs.
3. What is Autoclave?
4. How are plastics classified?
5. What is rigging of the flight control system?
6. What is the equipment used to track the blades of a helicopter?
7. Enumerate the components of hydraulic system.
8. List the few precautions to be observed while handling hazardous materials.
9. What are the five basic requirements of hazard common program?
10. What is meant by troubleshooting?

PART B — (5 × 13 = 65 marks)

11. (a) Explain in detail the procedure, construction, working and instructions for setting up laser welding equipment. (13)

Or

- (b) Illustrate NDI checks used in sheet metal inspection in detail. (13)

12. (a) Explain in detail about the inspection and repair of composite materials. (13)

Or

- (b) Discuss about the maintenance and repair of plastic components. (13)

13. (a) Explain in detail about tracking and balancing of main rotor of a helicopter. (13)

Or

- (b) Illustrate the procedure of jacking an aircraft. (13)

14. (a) Explain the inspection and maintenance of fixed and retractable landing gear. (13)

Or

- (b) Write in detail about inspection and maintenance of (13)

(i) Air conditioning System

(ii) Pressurization System

15. (a) Write in detail the safety precautions to be followed while storing and handling of hazardous materials. (13)

Or

- (b) Describe in brief about the three categories of hazardous materials in aircraft maintenance. (13)

PART C — (1 × 15 = 15 marks)

16. (a) Describe the important guidelines for installation and rigging of control surfaces. (15)

Or

- (b) Illustrate by quoting an example of trouble shooting procedure followed in aircraft servicing. (15)
