Reg. No. | | | | | | | | | | | | |

Question Paper Code : X10025

B.E./B.Tech. DEGREE EXAMINATIONS – NOV / DEC 2020

Seventh Semester

Aeronautical Engineering

AE8009 - AIRFRAME MAINTENANCE AND REPAIR

(Regulations 2017)

Time : 3 Hours | Answer ALL Questions | Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. Differentiate soldering and brazing
2. What is reverse technology?
3. List special precautions while handling composite repair
4. List two types of plastics used in aviation and its usage
5. List helicopter control and state its functions
6. What are the methods of mass balancing of control surfaces?
7. What is the purpose of APU?
8. What are the precautions while handling instruments?
9. What are the reaction agents in aviation industry?
10. What is FACTOR in hazardous material?

Part – B (5 x 13 = 65 marks)

11. a) (i) Describe setting up oxyacetylene welding plant with neat diagram. (8)

(ii) Explain laser welding method. (5)

OR

b) (i) Explain NDT methods for metal inspection. (7)

(ii)Describe rivet repair design in aviation. (6)

12. a) Explain maintenance and repairs of plastic components in aircraft. (13)

OR

b) Explain inspection and repairs of composite components. (13)

13. a) (i) Explain mass balancing of control surfaces. (6)

(ii) Describe helicopter controls with neat diagram. (7)

OR

b) Explain the heat treatment of Aluminum. (13)

14. a) Explain inspection and maintenance of landing gear in aircraft. (13)

OR

b) Write short notes

(i)Take off warning system (6)

(ii)Rain repellant system (7)

15. a) Explain storage and handling of hazardous material (13)

OR

b) i) Describe inspection and maintenance of air-conditioning and pressurization system. (7)

(ii) Explain trouble shooting procedure with example. (6)

PART C (1 X 15 = 15)

16. a) Pilot after flying the aircraft has reported the aircraft has tendency to yaw towards left in straight and level flight. Explain how you will rectify using rigging procedure. (15)

OR

b) Explain methods of main rotor blade tracking. (15)