

B.E DEGREE EXAMINATIONS: NOV/DEC 2014

(Regulation 2009)

Sixth Semester

AERONAUTICAL ENGINEERING

AER122: Aircraft Maintenance, Repair and Overhaul

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Reverse technology is used for
 - a) Engine component
 - b) Wing component
 - c) Panel board component
 - d) All the above
2. Rivet pitch is a distance between
 - a) rivet rows
 - a) rivet column
 - c) Sheet edge to rivet
 - c) row to column
3. Thermoplastic is
 - a) Reusable
 - b) One time usage
 - c) Two time usage
 - d) None of the above
4. Example for artificial composite
 - a) GFRP
 - b) Carbon
 - c) Fibre
 - d) Wood
5. Jaggging related to
 - a) Tail
 - b) Wing
 - c) Fuselage
 - d) Control surface
6. During balancing of rotor _____ is used
 - a) Plum bob
 - b) Spirit level
 - c) both a & b
 - d) Strain gauge
7. In aircraft air-conditioning system _____ refrigerant is used.
 - a) R-12
 - b) CO₂
 - c) NH₃
 - d) Helium

8. Inspection is
- a) Regular monitoring
 - b) Periodic monitoring
 - c) Both (a) & (b)
 - d) None of the above
9. Aircraft instruments maintenance is
- a) Scheduled
 - b) Breakdown
 - c) Preventive
 - d) None of these above
10. Auxiliary pump is used to
- a) Maintain the mass flow rate
 - b) Works when main pump repair
 - c) Supports to main pump
 - d) None of the above.

PART B (10 x 2 = 20 Marks)

- 11. Name the welding equipments.
- 12. Define NDT.
- 13. How holes are repaired in wings?
- 14. Compare inspection and maintenance.
- 15. How to locate C.G of wing?
- 16. List out the equipment required for balancing of rotor.
- 17. What are the difficulties faced during inspection of an air-conditioning system in an aircraft?
- 18. How to detect leakage in hydraulic system of an airplane?
- 19. What are different types of fire protection system used in aircraft?
- 20. What is meant by AMM?

PART C (5 x 14 = 70 Marks)

21. a) How to ensure quality welding in aircraft and explain the methodology
- (OR)**
- b) Illustrate the soldering and brazing usage in aircraft industry.
22. a) Explain about the usage of plastic in an aircraft and how maintenances carried out.
- (OR)**
- b) Briefly explain about the composite material inspection and maintenance carried out in an airplane.
23. a) Explain about step by step aircraft jacking procedure.
- (OR)**

b) How balancing of control surface inspection and maintenance are carried out in aircraft.

24. a) Explain about the inspection and maintenance of landing gear.

(OR)

b) Summarize the air-conditioning inspection of an aircraft.

25. a) Briefly explain about the aircraft auxiliary system maintenance.

(OR)

b) What are the safety precautions implemented while hazard material storage and handling?
