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${\bf Question\ Paper\ Code: X10018}$

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2021 Sixth Semester

Aeronautical Engineering AE 8002 – AIRCRAFT GENERAL ENGINEERING AND MAINTENANCE PRACTICES

(Regulations 2017)

Time: Three Hours

Maximum: 100 Marks

Answer ALL questions

PART - A (10×2=20 Marks)

- 1. What are the precautions observed before engine starting?
- 2. List ground power units used in airliner.
- 3. Write the principle of diluter demand pressure regulator in oxygen system?
- 4. Write the purpose of gasper system.
- 5. Define jigs and fixtures.
- 6. Name the hazardous materials in aviation industry.
- 7. Why check lists are used in aircraft inspection?
- 8. Why service bulletins are issued in the inspection process?
- 9. Difference between taper and reamer.
- 10. What are the advantages of swaging over splicing?

PART – B (5×13=65 Marks)

11. a) Write the precautions, tools and leveling procedure of heavy aircraft.

(OR)

b) Write the equipments and mooring procedure for the typical aircraft.

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12. a) Explain the air conditioning system for a wide bodied airliner with the diagram.

(OR)

b) Draw schematic diagram of fixed stored gas oxygen system for a light airplane and explain.

13. a) Explain the types of precision instruments used in the inspection bay of base maintenance shop.

(OR)

- b) Explain about shop safety, fire safety, electric safety in airplane maintenance.
- 14. a) Explain about type certificate data sheet, airworthiness directives and publications.

(OR)

- b) Explain about aircraft manuals and ATA specifications.
- 15. a) Explain the types and applications of bearings used in aircraft engine.

(OR)

b) Explain aircraft hardware standards used in airlines with examples.

PART – C (1×15=15 Marks)

16. a) Justify and discuss with suitable illustration while landing phase, aeroplane is heavily landed with high vertical velocity.

(OR)

b) Aircraft wing aluminum structure riveted portion is damaged, how do you design the rivet repair and the damaged structure is restored?