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**Question Paper Code : 40032**

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 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. Name some ground handling equipments.



2. What are the precautions to be followed in ground maintenance?

3. Mention few ground servicing subsystems.

4. Write an note on maintenance procedure of ground units.

5. Draw any three hand tools used in maintenance shop.

6. State some identification terminologies.

7. What is the purpose of inspection?

8. What are the checklists to be followed in inspection?

9. What happens if correct aircraft hardware is not used?

10. What are the types of bearings used in an aircraft?

PART B — (5 × 13 = 65 marks)

11. (a) Explain in detail about the following

(i) Mooring and jacking operations (7)

(ii) Leveling and owing operations (6)

Or

(b) Discuss the following in detail

(i) Starting procedure for Piston engine and turbojets (6)

(ii) Engine fire extinguishing. (7)

12. (a) (i) Discuss briefly about air conditioning systems. (6)

(ii) Briefly explain about cabin pressurization system. (7)

Or

(b) (i) With a neat sketch, explain oxygen subsystems. (7)

(ii) Emphasis the importance of oil systems. (6)



13. (a) (i) Write a note on shop safety precautions. (6)

(ii) Explain the significance of precision instruments. (7)

Or

(b) (i) What are the special tools used in an airplane maintenance shop? and explain any one. (6)

(ii) Explain the role of environmental cleanliness in maintenance of an airplane. (7)

14. (a) (i) Explain any two types of inspections and inspection intervals. (6)

(ii) FAR Air worthiness directives — explain. (7)

Or

(b) (i) Write short notes on ATA specifications. (7)

(ii) Explain any two inspection related publications and bulletins. (6)

15. (a) Describe the following:

(i) Plumbing connectors and cables (6)

(ii) Swaging procedure and its advantages over splicing (7)

Or

(b) Explain the following:

(i) Anyone type of fluid line fitting (7)

(ii) American system of specification (6)

PART C — (1 × 15 = 15 marks)

16. (a) Discuss on operations carried out without loss of any human life, when the aircraft is suddenly during due to one engine failure.

Or

(b) Explain any alternates available if the fuselage pressurizing system fails while the aircraft is airborne and explain with an example how inspection manuals help the Engineer to maintain the inspection standards.