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**Question Paper Code : 90051**

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2022.

Seventh Semester

Aeronautical Engineering

AE 8005 – AERO ENGINE MAINTENANCE AND REPAIR

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Draw a spark plug of a piston engine and label it.
2. What are the routine checks followed in a piston engine?
3. State propeller theory.
4. How propeller is installed in a piston engine?
5. Classify lubrication system used in jet engines.
6. What are the instruments used for online maintenance?
7. What are the symptoms of failure in jet engines?
8. Write a note on tools for visual inspection.
9. How engine components are cleaned?
10. Write about an overhaul procedure of an engine.

PART B — (5 × 13 = 65 marks)

11. (a) Explain fuel engine systems for large piston engines.

Or

- (b) Explain about the inspection of all engine components.

12. (a) Describe the checks to be followed on constant speed propellers.

Or

(b) Explain propeller balancing and pitch setting.

13. (a) Explain about permissible limits of damage and repair on criteria of engine components.

Or

(b) Explain about starting, running and operating procedures of a jet engine.

14. (a) Explain about the non-destructive testing techniques followed in an engine inspection.

Or

(b) Describe about rectification during testing equipments for overhaul.

15. (a) Explain about balancing of gas turbine components.

Or

(b) Explain about the procedures followed for monitoring engine on ground and at altitude.

PART C — (1 × 15 = 15 marks)

16. (a) Diagnose a case study of any engine failure during flight.

Or

(b) Explain about the latest methodology followed in engine health monitoring.