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Question Paper Code : Q 2736

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2009.

Seventh Semester

Aeronautical Engineering

AE 1009 — AERO ENGINE MAINTENANCE AND REPAIR

(Regulation 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. How are the piston engines classified?
2. What is the purpose of dual ignition system?
3. What is meant by special inspection?
4. Explain valve lead, valve lag and valve overlap.
5. What are the probable causes for the oil pressure not being within limit?
6. Explain backfiring.
7. State the different types of jet engines.
8. What is boroscope? Where is it used?
9. What is FADEC? Where is it used?
10. Define Trouble shooting.

PART B --- (5 × 16 = 80 marks)

11. (a) Explain in detail the practical cycle of OTTO cycle with diagram.

Or

- (b) With the aid of a diagram, explain the working principle of a simple float type carburetor.

12. (a) Explain the two methods of carrying out compression checks on piston engine aircraft with the diagrams.

Or

- (b) How do you carry out the various checks and inspection on crankshaft during overhaul of aeroengine?

13. (a) Explain the various equipments used in engine overhaul shop.

Or

- (b) Describe in detail the different tools and precision instruments used in aeroengine overhaul shop.

14. (a) Explain in detail the various inspections/servicing carried out on aeroengine deeply affected by foreign object damage.

Or

- (b) Explain the procedure of carrying out compressor wash.

15. (a) Explain the procedure followed to carry out balancing of rotating assembly of jet engine.

Or

- (b) Describe the condition monitoring of jet engine on ground and at attitude.