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10AE753

Seventh Semester B.E. Degree Examination, Dec.2014/Jan.2015

Aircraft Maintenance, Repair and Overhaul

Time: 3 hrs.

Max. Marks: 100

Note: Answer FIVE full questions, selecting at least TWO questions from each part.

PART - A

- 1 a. With a neat sketch, explain oxyacetylene welding equipments. (14 Marks)
- b. Explain GTAW equipment setup and check. (06 Marks)
- 2 a. Briefly explain the general design assumptions in sheet metal work. (04 Marks)
- b. What are the classifications of sheet metal damage? (06 Marks)
- c. Explain structural design philosophies in aircraft construction. (10 Marks)
- 3 a. Explain the characteristics of plastics. (04 Marks)
- b. How are plastic sheets protected while in storage? (04 Marks)
- c. Explain installation, maintenance and repair of plastic materials. (12 Marks)
- 4 a. Define composite. With a neat sketch explain the types of composite structures. (12 Marks)
- b. Explain the following:
 - i) Ring test
 - ii) Ultrasonic tester
 - iii) Radiology
 - iv) Acoustic emission
 (08 Marks)

PART - B

- 5 a. What is aircraft rigging? With a neat sketch, explain the installation and rigging of control surfaces. (12 Marks)
- b. What conditions are checked during the inspection of a control system? (08 Marks)
- 6 a. What are the types of hydraulic fluids? (03 Marks)
- b. Briefly explain the landing gear components. (07 Marks)
- c. What are the different flight instruments used in aircraft? Briefly explain. (10 Marks)
- 7 a. Explain inspection and servicing of fire protection system. (04 Marks)
- b. With a neat sketch, explain take-off warning indicator systems. (06 Marks)
- c. With a neat sketch explain inspection and maintenance of pneumatic mechanical Deicer systems. (10 Marks)
- 8 a. Briefly explain troubleshooting process and use of troubleshooting charts. (08 Marks)
- b. With a neat sketch, explain the flow format trouble shooting charts. (06 Marks)
- c. Draw a troubleshooting chart for a stored gas oxygen system in a light airplane. (06 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

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