

ONE TIME EXIT SCHEME

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10AE753

Seventh Semester B.E. Degree Examination, April 2018 Aircraft Maintenance, Repair and Overhaul

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions, selecting
atleast TWO questions from each part.**

PART - A

- 1 a. With a neat diagram, explain oxygen cylinder valve. (07 Marks)
b. Describe good quality completed weld characteristics. (06 Marks)
c. What is fixture? (03 Marks)
d. Describe the procedure for soft soldering. (04 Marks)
- 2 a. Derive the expression for N_r for 3D and 4D spacing. (10 Marks)
b. Calculate the diameter of the rivet required by using following data:
 $F_b = 97000$ psi, $F_s = 30000$ psi, $t = 0.032$ (04 Marks)
c. Describe riveting principle for stringers. (06 Marks)
- 3 a. Describe the characteristics of plastics. (04 Marks)
b. Explain the removal instructions for an acrylic wind shield i.e. adhesively bonded to the structure. (08 Marks)
c. What is crazing? (03 Marks)
d. How plug fitted to hole? (05 Marks)
- 4 a. With neat diagram, explain water removal using vacuum bag procedure. (10 Marks)
b. Explain the difference between co curing, co bonding and secondary bonding. (05 Marks)
c. Describe the principle of thermography. (05 Marks)

PART - B

- 5 a. Describe the items required for analyzing the operation of main rotor. (07 Marks)
b. Explain how the balance of control surface is accomplished. (07 Marks)
c. Write short notes on:
i) Collective pitch control
ii) Cyclic-pitch control (06 Marks)
- 6 a. Explain with detailed diagram of wheel toe in and chamber check. (10 Marks)
b. Illustrate the passenger water system in Airbus 330. (10 Marks)
- 7 a. Illustrate the operation of overheat and fire sensors. (06 Marks)
b. Describe flight control position indicating system for jet aircraft. (10 Marks)
c. What methods, other than wipers may be used to remove rain from a wind shield? (04 Marks)
- 8 a. Describe Hazardous materials storage and handling. (08 Marks)
b. With example, explain the trouble shooting chart. (12 Marks)

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