

**UNIVERSITI TUN HUSSEIN ONN MALAYSIA****FINAL EXAMINATION
SEMESTER I
SESSION 2011/2012**

COURSE NAME : AIRCRAFT SYSTEMS
COURSE CODE : BDU 20403
PROGRAM : 2 BDC
EXAMINATION DATE : JANUARY 2012
DURATION : 2 HOURS AND 30 MINUTES
INSTRUCTION : ANSWER ANY FOUR (4)
QUESTIONS

THIS PAPER CONSISTS OF THREE (3) PRINTED PAGES

- Q1** (a) Discuss the terms 'aircraft air worthiness' (5 marks)
- (b) What is repair, major repair and minor repair? (15 marks)
- (c) What is special flight permit and what criteria have to be met before such permit is issued? (5 marks)
- Q2** (a) What is the main function of a modern commercial jet airliner environmental control system (ECS). (5 marks)
- (b) Name and discuss five major components of a modern commercial jet airliner environmental control system (ECS). (20 marks)
- Q3** (a) Briefly discuss the types of landing gear of a modern airline aircraft. (9 marks)
- (b) What are the considerations when selecting aircraft wheels and tires? (16 marks)
- Q4** (a) Define hydraulic system and briefly described the three types of hydraulic fluid. (9 marks)
- (b) Explain a typical hydraulic power pack that is used in the landing gear of an aircraft. (16 marks)

- Q5** (a) What are the functions of the lubricating and cooling systems of an aircraft?
(8 marks)
- (b) Discuss the important features of the lubricating system between a reciprocating engine and gas turbine engine.
(17 marks)
- Q6** (a) What is de-icing and anti-icing of an aircraft and its impact on the environment?
(6 marks)
- (b) Why is it important to de-icing of aircraft at the ground level when the outside temperature is low (temperature about 0°C)?
(6 marks)
- (c) In which parts of the aircraft are the pneumatic, electric and air-bleed de-icing systems commonly used?
(13 marks)