

**B.TECH. (AEROSPACE ENGINEERING)
(BTAE)**

**Term-End Examination
June, 2013**

**BAS-011 : AIRCRAFT SYSTEMS AND
AIRWORTHINESS REQUIREMENTS**

Time : 3 hours

Maximum Marks : 70

Note : Answer any seven questions.

1. (a) Describe with the help of a diagram, the functioning of a Gravity Feed fuel system in an aircraft. 6
- (b) What are the possible causes of fuel contamination ? 4
2. (a) What is the function of an actuator in an aircraft hydraulic system ? Explain the functioning of aircraft under carriage system in brief. 6
- (b) What are the essential components of an aircraft electrical system ? 4
3. (a) What are the precautions and procedure adopted to carry out servicing of oxygen systems ? 4

- (b) Explain with a diagram the functioning of a diluter demand oxygen system. 6
4. (a) Describe the functioning of an optical smoke detector. 4
- (b) Explain in detail the classification of fire extinguishers. 6
5. (a) What are the methods of achieving ice control on aircraft wind screens ? 4
- (b) What are the requirements of a lubrication system? What does high oil temperature in flight indicate ? 6
6. (a) What is decompression ? What are its effects on pilots and passengers ? 4
- (b) What are the two types of air-conditioning systems used in aircraft ? Explain any one of them. 6
7. (a) What are the categories under which an aircraft can be registered by the DGCA ? What are the documents required to be submitted with an application for registration ? 4
- (b) Define Air Worthiness. What is C of A ? Under what conditions would a C of A cease to be valid ? 6

8. (a) Under what conditions can the DGCA issue special flight permits ? 4
- (b) What log books are to be maintained for any aircraft ? 6
9. (a) What are the components of a typical pneumatic power system ? 4
- (b) Explain the functioning of a dry sump oil system. 6
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