

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

Term-End Examination

June, 2015

00136

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

Time : 3 hours

Maximum Marks : 70

Note : Answer any seven questions. All questions carry equal marks.

1. (a) What are the different categories and sub-divisions of aircraft for issuance of airworthiness certificate as per Civil Aviation Requirements, Section-II, Series-'F' ? 6
- (b) What are the reasons for de-registration of an aircraft ? 4
2. What are the basic advantages of pneumatic system ? 10
3. Describe de-icing system in an aircraft. 10
4. (a) Explain with sketches the open and closed centre hydraulic systems. 5
- (b) What are the significant differences between the open and closed centre hydraulic systems ? 5

5. (a) What are the main functions of fuel system ? What are the different fuel tanks in use ? Why is fuel pressurization necessary ? 6
- (b) What is the problem caused due to presence of water contamination ? How is it taken care of ? 4
6. (a) Explain briefly the various components of aircraft fuel system. 6
- (b) Describe the purpose and function of ejector pump. 4
7. (a) Explain the principle of electro hydraulic servo system with a neat sketch. 5
- (b) Describe any two applications in an aircraft system. 5
8. Write short notes on the following :
- (a) ICAO regulation 5
- (b) Accumulatore 5
9. (a) Explain with a diagram the function of vapour cycle cooling system. 5
- (b) What are single acting and double acting actuators ? 5
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