

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

**Term-End Examination**

**June, 2015**

00356

**BAS-018 : AIRCRAFT SAFETY AND MAINTENANCE  
ENGINEERING**

*Time : 3 hours*

*Maximum Marks : 70*

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*Note : Answer any seven questions. All questions carry equal marks. Use of scientific calculator is permitted.*

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1. A maintenance technician is performing task at continuous time. Derive an expression to check his reliability, if the rate of errors made by the maintenance technician is assumed to be constant. An Aircraft maintenance person is performing time continuous task at 0.008 errors per hour. Calculate his reliability during a 7-hour mission. 10
2. Briefly explain the different types of ground support units. What are the intake and exhaust hazard areas ? 10
3. What is Non-Destructive Testing (NDT) ? What kinds of NDT techniques are used to ensure safety of an airplane ? 10

4. (a) What is rigging of an Aircraft ? What are the precautions to be taken while parking of an Aircraft ? 5
- (b) What are Aircraft logs ? What are the guidelines for issuance of Airworthiness Certificates ? 5
5. (a) What are the benefits of condition based maintenance system ? 5
- (b) Define system safety. What are the components of a system safety programme plan ? 5
6. (a) What is Aircraft proximity ? How has aircraft proximity been classified in Air Safety Circular ? 5
- (b) When is dual control deactivation resorted to in small aircrafts and helicopters ? 5
7. Explain the starting procedure of an Aircraft piston engine. 10
8. (a) What are the stages in a system life cycle ? On what basis is an Aircraft component life decided ? 5
- (b) What is the purpose of a maintenance check-list ? 5
9. (a) What is reconditioning in maintenance ? Discuss the steps followed in reconditioning of an Aircraft engine. 5
- (b) Explain the different aspects involved in ensuring Aircraft maintenance safety. 5