

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

Term-End Examination

December, 2011

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

Time : 3 hours

Maximum Marks : 70

*Note : Answer **any ten** questions. All questions carry equal marks.*

1. Define special inspection of aircraft components. 7
What are the precautions to be taken while loading compressed air ?
2. Briefly describe an Airworthiness directive. Also 7
describe the different types of publications used in aircraft maintenance as per the CAR.
3. Why is environmental cleanliness required in 7
aviation ? How is it maintained ?
4. What is rigging of an aircraft ? What are the 7
precautions to be taken while parking an aircraft ?
5. What are aircraft logs ? What are the guidelines 7
for issuance of Airworthiness certificates ?

6. Describe the form steps of Statistical Process Control (SPC) in aircraft health monitoring. 7
 7. What are the various aerospace sensors used for data acquisition for the purpose of monitoring aircraft structural health ? Explain the functioning of any two. 7
 8. What is Non Destructive Testing (NDT) ? What kinds of NDT techniques are used to ensure safety of an airplane ? 7
 9. What are the responsibilities laid out in Air Safety Circulars for ensuring correct refuelling ? What are the aircraft operator's and fuel vendor's responsibilities in this regard ? 7
 10. What is aircraft proximity ? How has aircraft proximity been classified in Air Safety Circular ? 7
 11. What are the stages in a system life cycle ? On what basis is aircraft component life decided ? 7
 12. Explain the starting procedure of an aircraft jet engine. 7
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