

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

Term-End Examination

June, 2015

00401

BAS-019 : AIRCRAFT INSTRUMENTS

Time : 3 hours

Maximum Marks : 70

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

1. Explain the principle of operation of an altimeter, used for measuring altitude of an aircraft, with a neat sketch. 10
2. List out the advantages of Fly-By-Wire control over the conventional Mechanical Flight control system. 10
3. Define the term "Mach number" and describe how it is indicated by measurement of pitot and static pressures in a Machmeter. 10
4. Explain the construction and working of a Bourdon tube used for pressure measurement. 10
5. Write short notes on the following : 5+5=10
 - (a) Cylinder Head Temperature (CHT)
 - (b) Engine Pressure Ratio (EPR)

6. Define the following terms : 5×2=10
- (a) Static pressure
 - (b) Vertical speed of aircraft
 - (c) Altitude of aircraft
 - (d) Dynamic pressure
 - (e) Tail wind
7. Explain the working and construction of an accelerometer, with a neat sketch. 10
8. List down the various kinds of temperature indicators used in an aircraft and explain any one of them. 10
9. What is a “Tachometer” ? Explain, in detail, any one type of tachometer. 10
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