

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

00293

Term-End Examination

December, 2018

BAS-019 : AIRCRAFT INSTRUMENTS

Time : 3 hours

Maximum Marks : 70

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

1. What is Pitot tube ? Describe with a neat sketch, the principle and working of a pitot-tube. 10

2. State the working principle of a gyroscope. Also, explain any one gyroscopic instrument used in an aircraft. 10

3. (a) Draw the block diagram of goniometer and explain it.

- (b) Explain the following in brief : 5+5
 - (i) Altimeter
 - (ii) Magnetic Compass

4. Define any *five* of the following : 5×2=10
- (a) True Air Speed
 - (b) Indicated Air Speed
 - (c) Equivalent Air Speed
 - (d) Magnetic Equator
 - (e) Isogonic Line
 - (f) Trunnion
5. Explain the working and construction of an accelerometer with the help of a neat sketch. 10
6. What is a 'Tachometer' ? Explain in detail any one type of Tachometer. 10
7. Draw a block diagram of a typical radio-navigation system and explain it. 10
8. Briefly describe the following : 2×5=10
- (a) ILS
 - (b) Marker Beacon
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