**Karunya University**

**(Karunya Institute of Technology and Sciences)**

(Declared as Deemed to be University under Sec.3 of the UGC Act, 1956)

**Supplementary Examinations – June 2016**

**Subject Title: Aircraft Instrumentation Time : 3 hours**

**Subject Code: 14AE2010 Maximum Marks: 100**

**Answer ALL questions (5 x 20 = 100 Marks)**

1. a. Give a short note on measuring systems. With an example explain the functional elements of the system. (10)

b. Give short notes on indicating, recording and integrating types of instruments. (10)

**(OR)**

2. a. What are pitot static instruments? Explain their working. (10)

b. Explain any two different types of instrument mechanisms. (10)

3. Explain gyros, their properties and cockpit instruments dependent on them.

**(OR)**

4. Draw and explain the working of following

a. Vacuum system operation (7)

b. Magnetic compass (7)

c. Thermistors (6)

5. a. What are photoelectric and photo emissive cells? Explain their working. (10)

b. Explain the working of strain gauge and LVDT. (10)

**(OR)**

6. a. Explain float type fuel quantity indicating systems. (10)

b. Explain fuel flowmeters and give a brief note. (10)

7. Explain the concepts of accelerometer and their types.

**(OR)**

8. a. Explain thermocouple and its types with their working in detail. (10)

b. Give a short note on temperature sensing element and radiation pyrometer system. (10)

9. **Compulsory:**

Explain the power indicators of turbo prop engines.