

**Reg. No. :**

|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|

**Question Paper Code: 31587**

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

Elective

Electronics and Instrumentation Engineering

01UEI913 - APPLICATION OF INSTRUMENTATION IN AEROSPACE AND  
NAVIGATION

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Compare TAS and EAS.
2. What is rate of climb?
3. Name any four navigation system.
4. In what way Instrument Landing System (ILS) differs from Ground Controlled Approach (GCA)?
5. What is the functioning of GPS steering system?
6. What is Star tracker?
7. Distinguish between fuel system of piston and jet engine.
8. Define AFCS.
9. What is SELCAL?
10. What is trouble indicator light?

PART - B (5 x 16 = 80 Marks)

11. (a) (i) How are the gyroscopic properties utilized in Flight instruments. (6)  
(ii) Describe the working of Turn and bank indicator with neat diagram. (10)

Or

- (b) Explain in detail about the electronic display used in aircrafts. (16)  
12. (a) What is the principle of Radio Direction Finding (RDF)? Explain the method of RDF with relevant diagram. (16)

Or

- (b) Explain the cabin pressure measurement and temperature measurements with diagrams. (16)  
13. (a) What is GPS? How GPS plays a major role as a navigational aid. (16)

Or

- (b) Explain in detail about the functioning of pitch and roll stabilization. (16)  
14. (a) Discuss the construction and operation of Aircraft Flight Simulator (AFS). (16)

Or

- (b) Explain in detail the different flight controls and auto pilot troubles. (16)  
15. (a) Explain hydraulic systems troubles and landing gear troubles in detail. (16)

Or

- (b) Explain in detail about the usage of black box and its operation. (16)
-