

R09

Code No: 58089

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year II Semester Examinations, July - 2021

AVIONICS AND INSTRUMENTS

(Aeronautical Engineering)

Time: 3 hours

Max. Marks: 75

**Answer any Five Questions
All Questions Carry Equal Marks**

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1. Describe the role of avionics as an interface between humans and aircraft and explain different electronic components required. [15]
2. Write short notes on the following:
a) Attitude Direction Indicator
b) Altimeter [8+7]
3. Explain in detail the working principle of an Automatic Direction Finder with a circuit diagram. [15]
4. Explain the following:
a) Performance Based Navigation
b) Integrated/ Hybrid navigation. [8+7]
5. Elaborate the need of various control and monitoring requirements in a fly-by-wire flight control system. [15]
6. Discuss about the following in the context of aircraft navigation
a) Terrain awareness Warning System
b) Path Definition Error [10+5]
7. What are the applications of electro-optics and infrared devices in military aviation? Discuss their advantages and limitations. [15]
8. What is the principle of operation of magnetometry and explain with a diagram. [15]

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