Code No: 37157/37158 **R05** **Set No - 4**

IV B.Tech I Semester Regular Examinations,Nov/Dec 2009
AVIONICS
Aeronautical Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. Write descriptive notes on the following:
   (a) Antennas
   (b) CVR. [8+8]
2. (a) Define and explain the concept of VHF omni Range (VOR).
   (b) Differentiate celestial, Radio-Radar, Electronic Navigation. [8+8]
3. (a) Explain the salient feactures and operating procedure of "Surveillance Radar Element".
   (b) What is function of Pecision Approach Radar (PAR) and the PAR display both in Azimuth and Elevation? [8+8]
4. Explain the following display system architectures with the help of diagrams.
   (a) Dumb display architecture
   (b) Semi-smart display architecture
   (c) Fully smart display architecture. [6+5+5]
5. (a) Draw a schematic lay-out of a modern civil transport airplane Avionics architecture using triplex redundant ARINC-429 DATA Bus.
   (b) Using the above schematic layout explain Boeing-777 Airplane Control and Management System. [8+8]
6. (a) Listout GPS signal characteristics.
   (b) How "GLONASS" characteristics differ from that of GPS? [8+8]
7. Differentiate "Analytical Frame of Reference" of Strapped Down INS, "Space Stabilized INS" and "Stabilized, Levelled & Initialized Platform version of INS" with its applications. [16]
8. Discuss the following task management avionic systems.
   (a) Navigation management system
   (b) Autopilots and flight management system. [7+9]

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