R09

Code No: C7612

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.Tech I - Semester Examinations March/April-2011
FLIGHT NAVIGATION AND SURVEILLANCE SYSTEMS
(AEROSPACE ENGINEERING)

Time: 3hours **Max.Marks:60**

Answer any five questions
All questions carry equal marks
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1. Describe the geometry of earth. Discuss terrain matching navigation. [12]

2. Explain the different point source systems in navigation. [12]

3. Describe the GLONASS orbits, signal structure and coordinate system. [12]

4. (a) Compare the strap-down and gimballed platforms.
   (b) What are the ten initial conditions required to initialize the computer of a platform in the case of navigation? [12]

5. What do you understand by vertical and heading references? What are the instruments that help you in obtaining these references? [12]

6. Describe the landing aids in aviation – ILS, MLS and satellite landing systems. [12]

7. Describe the 11-state GPS-INS Linear Error model. [12]

8. Explain the three segments – the initial approach, intermediate approach, final approach – in instrument landing system. [12]

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