R09

Code No: D7602

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.TECH II - SEMESTER EXAMINATIONS, APRIL/MAY 2012
SPACE TRANSPORTATION SYSTEMS
(AERO SPACE ENGINEERING)

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

Answer any five questions
All questions carry equal marks

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1. Write about the following Engineering management system in an spacecraft
   a) Project management
   b) Risk management.

2. Explain about the following optimization strategies
   a) Parametric methods
   b) HOLIST design optimization
   c) Gradient methods.

3. Write about the propulsion system consideration for Interstellar flight.

4. What is system engineering? Explain all the nine steps involved in the cyclic process of systems engineering.

5. Write in detail about the future expendable launch vehicle and discuss about its launch operations with the help of a flow chart.

6. Discuss the history and development of the Delta Series of Launch Vehicles.

7. Discuss the infra structure required for future Mars missions.

8. Write about the following
   a. Applications of manned reusable launch vehicles
   b. Transatmospheric vehicle development.

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