
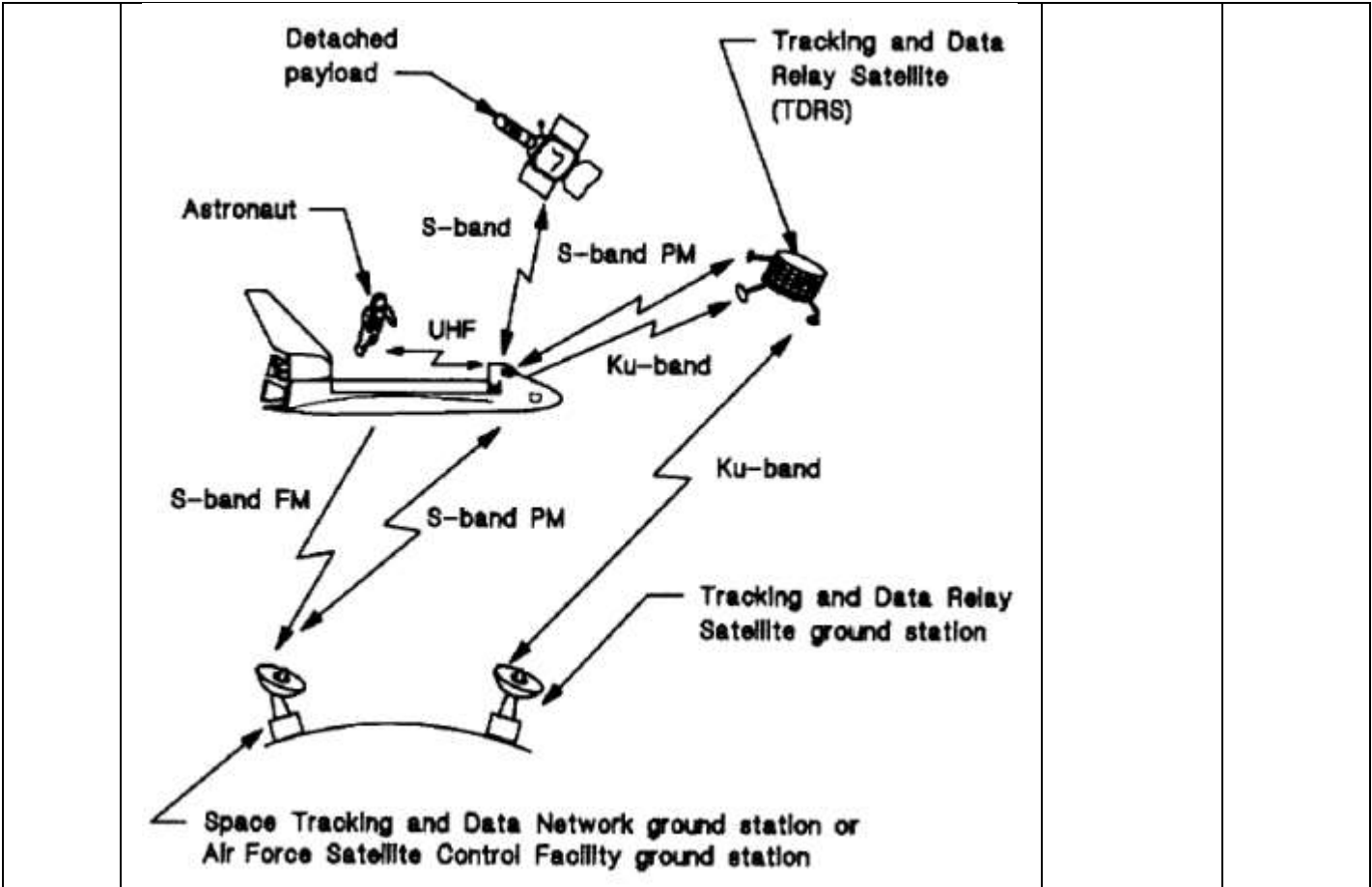


Name:			
Enrolment No:			
UNIVERSITY OF PETROLEUM AND ENERGY STUDIES End Semester Examination, December 2022			
Programme Name: B Tech (Aerospace Engineering with Spz. In Avionics)		Semester : VII	
Course Name : Spacecraft Avionics		Time : 03 hrs	
Course Code : AVEG 4008		Max. Marks: 100	
Nos. of page(s) : 02			
Schematic diagrams are must in each answers			
SECTION A (5Qx4M=20Marks)			
S. No.		Marks	CO
Q 1	How C&DH (Command & Data Handling)?	4	CO1
Q 2	Draw C&T (Communication & Tracking) for the spacecraft trajectory	4	CO2
Q 3	What are the various techniques for Instruments wiring	4	CO3
Q 4	How ascending and descending satellite modes affects the data capturing	4	CO 4
Q 5	Explain the software architecture of the Spacecraft mechanism	4	CO 4
SECTION B (4Qx10M= 40 Marks)			
Q 6	What are the various navigation systems used in aircraft? How the navigation plays important role in guiding the vehicles?	10	CO4
Q 7	Draw and explain the different trajectory analysis for Earth observation satellites and the Interplanetary missions.	10	CO 3
Q 8	Describe the principle of operation of GPS and DGPS used for the navigational purposes.	10	CO 2
Q 9	Explain the various guidance and navigation processes used for Spacecraft propulsion technology	10	CO 1
SECTION-C (2Qx20M=40 Marks)			
Q 10	Explain the on board communication link as shown below.	20	CO2



Q 11 Discuss Shuttle Baseline structure as shown below.

