(a) List Five major types of orbits and explain any two of them in detail.
(b) The uplink C/N<sub>0</sub> ratio is 88dBHz and downlink value is 78dBHz. Calculate overall
07
07
07
08
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
09
<l

 $C/N_0$ .

OR

Q.4 (a) List all seven operational NGSO constellation design and explain any two of them 07 in detail.

(b) In a TDMA system transmission rate is 60 Mbps, Voice channel bit rate is 64 **07** Mbps Number of burst/ frame are 10, number of bits in a preamble are 150. frame time 750 µsec. Find Noise channel capacity.

Q.5 (a) What is GPS? Explain principle of GPS position location. Also explain signal 07 generation in GPS.

(b) Draw and Explain the block diagram of satellite transponder in detail 07

OI

Q.5 (a) List all propagation effects which are not associated with hydrometer and explain 07 them

(b) Give all the steps to launch the satellite vehicles for geostationary orbits and 07 explain it with required figure and equations.

\*\*\*\*\*\*