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**Question Paper Code: 52Q01**

M.E. DEGREE EXAMINATION, APRIL 2019

Second Semester

Communication Systems

15PCM201 - SATELLITE COMMUNICATION

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) State Kepler's three laws of planetary motion. Illustrate in each case their relevance to artificial satellites orbiting the earth. CO1- U (20)  
Or  
(b) Clearly explain the orbital description and bandwidth allocation of a satellite communication. CO1- U (20)
2. (a) Discuss briefly how demand assignment and pre-assignment may be implemented in TDMA network. What are the advantages of TDMA over FDMA in this respect. CO2- U (20)  
Or  
(b) Explain the different coding schemes used for satellite communication with their merits and demerits. CO2- U (20)
3. (a) Derive the satellite uplink and downlink C/N power spectral density ratio using C/N ratio. CO3-App (20)  
Or  
(b) Derive the link power budget with suitable terms. CO3-App (20)
4. (a) Explain the GPS position location principles. CO4- U (20)  
Or  
(b) Discuss the acquisition of satellite signal in GPS in detail. CO4- U (20)

5. (a) What is satellite packet communication and explain it with the CO5- U (20) required diagrams?

Or

- (b) What are the mobile satellite services and explain it with the CO5- U (20) required diagrams ?
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