

Code No: A6503

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M.Tech I Semester Examinations, March/April-2011

MOBILE COMMUNICATIONS

(WIRELESS AND MOBILE COMMUNICATIONS)

Time: 3hours

Max. Marks: 60

Answer any five questions
All questions carry equal marks

- - -

- 1.a) Explain satellite system architecture .
- b) Describe the Single & Triple coverage of earth by satellites in detail. [12]
- 2.a) Discuss the effects of eclipse on satellites in detail.
- b) Explain spectrum forecast methodology with a neat flow chart. [12]
- 3.a) Explain various band propagation measurement technique for a main channel.
- b) Discuss mobile radio channels. [12]
- 4.a) Write short notes on orbital debris in non geostationary satellites.
- b) What are the advantages of spot beams? [12]
- 5.a) Explain the inclined & Hybrid constellations. What is Regional coverage?
- b) Discuss Maritime & Aeronautical channels. [12]
6. Find E_b/N_0 for the communication M.SAT CDMA networks assuming AWGN channels. [12]
- 7.a) List the advantages of LEO & disadvantages of MEU systems.
- b) Explain the linear, rectangular, circular apertures of antennas used in satellite communication. [12]
8. Write short notes on:
 - a) MEO Systems
 - b) Radio Link Analysis. [12]

* * * * *