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D – 3525

Reg. No. :

Name :

Eighth Semester B.Tech. Degree Examination, December 2017
08.804 : SATELLITE AND MOBILE COMMUNICATION (T)
(2008 Scheme)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions. **Each** question carries **4** marks.

1. Explain the difference between cross polarization discrimination and polarization Isolation.
2. Describe the significance of up conversion and down conversion of Satellite TV Signal.
3. Explain the term coverage angle and slant range.
4. Explain the following terms :
 - a) Line of apsides
 - b) Ascending node.
5. Write notes on Co-channel interference in cellular concept.
6. What is the purpose of cell splitting ?
7. Illustrate the term Doppler shift.
8. What is meant by Gold codes ?
9. Explain ergodic capacity of flat fading channel.
10. What is meant by the term Co-antenna Interference (CAI) ? **(10×4=40 Marks)**

P.T.O.



PART – B

Answer **any two** questions from **each** Module. **Each** question carries **10** marks.

Module – I

11. Briefly describe the equipment sections making up a transponder channel.
12. With the aid of a block schematic briefly describe the functioning of the indoor receiving unit of a Satellite TV/FM receiving system intended for home reception.
13. Describe earth eclipse of an earth orbiting Satellite. Why is it preferable to operate with a Satellite positioned west rather than east of earth station longitude ?

Module – II

14. Explain the frame structure of GSM.
15. What are the different types of small scale fading occurring in mobile communication ?
16. Explain the different methods used to improve the capacity of a cellular system.

Module – III

17. Explain the phenomenon of near far problem and how to overcome this problem.
 18. Explain how FEC coding improves a signals overall performance.
 19. Explain space diversity technique on receiver. **(6×10=60 Marks)**
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