

Total No. of Questions { 8 }

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MEDC-205**M.E./M.Tech., II Semester**

Examination, June 2017

Mobile And Satellite Communication**Time : Three Hours****Maximum Marks : 70**

- Note :** i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Explain the types of handoff strategies used in cellular communication.
b) Describe the channel assignment strategies used in cellular communication.
2. a) Indicate the condition for flat fading for each of the following data rates:
8 kbps, 40 kbps, 100 kbps, 6 Mbps.
Indicate which, if any, radio environments would result in flat fading for each of these data rates.
b) Explain what is trunking efficiency and GOS? State the Erlang B and Erlang C formula for blocked cells cleared and blocked cells delayed system.
3. a) What is meant by equalization? Explain any one adaptive equalising algorithm.
b) Briefly explain various frequency bands used for satellite communication and frequency allocations for mobile satellite service.

MEDC-205

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[2]

4. a) Why are constant-envelope modulation techniques preferred for use on radio channels for mobile communication?
b) Compare IEEE 802.11, HiperLAN 2 and Bluetooth with regard to their Ad-hoc capabilities. Where is the focus of these technologies?

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5. Compare the power saving mechanism in all three LAN's. What are the negative effects of the power saving mechanism, what are the trade offs between power consumption and transmission QoS?
6. a) Discuss the concept of handover in connection with the satellite communication system.
b) Explain forward link and reverse link structure in IS-95 CDMA system.
7. a) What are the assumptions made in the performance analysis of a few LEO and MEO systems in a hypothetical urban environment.
b) Draw and explain the layered protocol architecture of IEEE 802.11 standard.
8. Write short notes on the following (any two):
a) GPRS system
b) OFDM
c) Co-channel interference

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4436

MEDC-205