

Roll No.

22152

M.E. 2nd Semester (E.C.E.)

Examination–May, 2014

WIRELESS MOBILE COMMUNICATION

Paper- MEEC-508

Time : 3 hours

Max. Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard will be entertained after the examination.

Note : Attempt any **five** questions out of given eight.

1. (a) Write an equation that relates the speed of light 'C' to carrier frequency 'f' and wavelength ' λ '. 4

(b) Why do paging systems need to provide low data rates ? How does a low data rate lead to better coverage ? 6

- (c) Between a pager, cellular phone and a cordless phone, which device will have the longest battery life between charging and why ? 5
- (d) Why is FM, rather than AM used in most of mobile radio systems ? 5
2. (a) Explain the concept of trunking and grade off service. 10
- (b) Explain the different HO Strategies. 10
3. (a) Derive an expression for co-channel interference and system capacity. 10
- (b) Explain the concept of cell splitting and sectoring. 10
4. Write short notes on : 20
- (a) Frequency reuse
- (b) Doppler spread
- (c) Microcell zone
- (d) Softer Hand off

5. (a) What is capacity of cellular CDMA ?
Derive an expression for it. 10
- (b) What are packet radio protocols ?
Explain. 10
6. (a) Explain TDMA, FDMA & CDMA in detail. 10
- (b) What is mobile data networking ? How it
is implemented ? 10
7. (a) What is fading ? How it affects the
cellular communication ? 10
- (b) What are different types of diversities ?
Explain. 10
8. Write short notes on: 20
- (a) GPRS
- (b) GNS Standards.
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