Nov - Dec - 2012

Total No. of Questions : 12]

SEAT No. :

P1202

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# [4264] - 699

## B.E. (Computer Engineering)

## MOBILE COMPUTING

## (2008 Pattern) (Elective - II) (Semester - I)

*Time :3 Hours]* *[Max. Marks :100*

*Instructions to the candidates:-*

1) *Answer THREE questions from each section.*
2) *Answers to the TWO sections should be written in SEPARATE answer books.*
3) *Figures to the right indicate full marks.*
4) *Assume suitable data, if necessary.*

## SECTION - I

*Q1)* a) Explain the cell layout and frequency planning for the GSM system. **[8]**

b) What are Home Location Register (HLR) and Visitor Location Register (VLR)? **[6]**

c) Enlist the functions of a mobile station (MS). **[4]**

OR

*Q2)* a) With suitable diagram explain configuration of a BTS - BSC combination with reasoning for rural, urban and suburban areas. State its advantages and disadvantages of it. **[10]**

b) State the main functions of NMC and its relationship with respect to OMC. **[8]**

*Q3)* a) What are the various logical channels in GSM? Describe them in brief. **[8]**

b) What are the various reasons for choosing frequency hopping in GSM. **[8]**

OR

*Q4)* a) Explain the sequence of operations that the mobile has to take within a system. **[8]**

b) Describe the time organization of full rate and half rate traffic channel. **[8]**

*Q5)* a) Name three distinct states of the mobile. What functions must mobile perform in these states? Why initialization is necessary for mobile after the power is turned on? **[8]**

b) With the help of a suitable diagram explain the necessary steps for the establishment of PSTN-MS CALL. **[8]**

*P.T.O.*