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Total number of printed pages – 2

B. Tech
FECE6402

Seventh Semester Examination – 2013

PRINCIPLES OF MOBILE COMPUTING

BRANCH : AEIE, IEE, ETC, EC

QUESTION CODE : C- 251

Full Marks – 70

Time : 3 Hours

Answer Question No. 1 which is compulsory and any **five** from the rest.
The figures in the right-hand margin indicate marks.

1. Answer the following questions : 2×10
- What is the difference between hand-off and roaming ?
 - What are the different functions of MSC ?
 - Write five different types of satellites and their uses.
 - How are the satellites arranged in Globalstar ?
 - What are the different security modes implemented in Bluetooth ?
 - Write the four major technologies that WLL is based on.
 - What are the advantages of CDMA cellular network ?
 - Compare the IEEE 802.11a and IEEE 802.11b standards.
 - What is the fundamental difference of WML compared to HTML ?
 - What are the different types of virtual networks ?

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2. (a) What is anchor MSC ? What is the role of anchor MSC in path minimization ? 5
- (b) What are HLR and VLR ? Describe the functions of HLR and VLR in call routing and roaming. 5
3. (a) Explain the GPRS architecture with its constituent elements. 5
- (b) List the entities of mobile IP and describe data transfer from a mobile node to a fixed node and vice versa. 5
4. Describe WAP protocol stack. What are the functions of different layers in this protocol stack ? 10
5. (a) Describe elaborately of a 3G network based on CDMA 2000 technology. 5
- (b) What are the IMT-2000 set of standards ? Explain their evolution from 2G networks. 5
6. (a) Compare the WCDMA and CDMA 2000 in terms of channel characteristics. 5
- (b) Discuss the advantages and disadvantages of LEO and GEO. 5
7. (a) How does a new Bluetooth device discover a Bluetooth network ? 5
- (b) Explain MIDlet life-cycle with an example. 5
8. Write short notes on any **two** of the following : 5×2
 - (a) GSM vs. GPRS
 - (b) WAP 1.0 vs. WAP 2.0
 - (c) Infrastructure mode vs. Ad-hoc mode in WLAN
 - (d) Piconet vs. Scatternet in Bluetooth.

