	Utech
Name:	<u>A</u>
Roll No.:	In Spanier With Americal pr Start Experience
Invigilator's Signature:	

CS / B.TECH (CSE) / SEM-8 / CS-802A / 2011

2011

MOBILE COMPUTING

Time Allotted: 3 Hours Full Marks: 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP - A le Choice Type Questions

		(Multiple	e Ch	oice Ty	pe Q	juestions)		
1.	1. Choose the correct alternatives for the following : 10×10^{-1}								= 10
	i)	GSM uses				for n	nultiplexing.		
		a)	CDMA			b)	TDMA		
		c)	FDMA			d)	both (b) and	(c).	
	ii)	The	wireless	stan	dard wh	ich i	s a set of pro	tocols	that
		allov	ws porta	ble	devices	to	communicate	with	the
Internet, is									
		a)	TDMA			b)	CDMA		
		c)	WAP			d)	VXML.		
	iii)	SIM	algorithn	n is c	hecked t	у			

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b)

d)

HLR

EIR.

AUC

VLR

a)

c)

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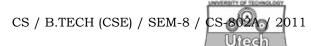


- iv) What does 'GSM' stand for?
 - a) Greater System's Mobile
 - b) Global System for Mobile Communication
 - c) Global System Mobile
 - d) None of these.
- v) Mobile IP is
 - a) layer 2 protocol
- b) layer 3 protocol
- c) layer 4 protocol
- d) none of these.
- vi) WLL stands for
 - a) Wireless Local Loop
- b) Wired Local Loop
- c) Wireless Live Loop
- d) Wire Less Loop.
- vii) Piconet consists of
 - a) six devices
 - b) eight devices
 - c) eight bluetooth devices
 - d) seven bluetooth devices.
- viii) Access method in IEEE 802·11 for wireless LANS is based on
 - a) CSMA CD
- b) CSMA CA
- c) Token Passing
- d) CSMA.
- ix) Functions of GPRS include
 - a) radio resource management
 - b) mobility management
 - c) network management
 - d) all of these.
- x) CDMA allows
 - a) many users to share a common frequency / time channel
 - b) many users to share only a common frequency

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- c) many users to share only a common time channel
- d) none of these.

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GROUP - B

(Short Answer Type Questions)

Answer any three of the following.

 $3 \times 5 = 15$

- 2. Explain different types of satellite.
- 3. a) What services are provided by GSM system?
 - b) What are the uplink and downlink frequency of GSM system?
- 4. Explain the functionalities of serving GPRS support node and gateway GPRS support node after illustrating the GPRS architecture.
- 5. a) What is meant by an Wireless Enterprise Network?
 - b) What issues are to be supported for such networks?

3 + 2

- 6. a) What are the characteristics of 3G systems?
 - b) Compare between W-CDMA and CDMA 2000 with reference to chip rate and timing synchronization with base station.

GROUP - C

(Long Answer Type Questions)

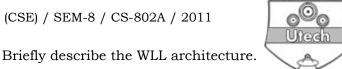
Answer any *three* of the following. $3 \times 15 = 45$

- 7. a) Show the Wireless Application Protocol stack.
 - b) Describe Wireless Transport Layer Security and Wireless Session Protocol. 3 + 12

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8.

a)



Name any two major WLL technologies. What are the b) advantages and disadvantages of these approaches?

5 + (2 + 8)

- 9. What are the different strategies for detecting a) hand-off?
 - How is roaming of a Mobile station managed? 5 + 10 b)
- 10. What is the difference between care-of-address and a) co-located care-of-address?
 - How does a reverse tunnel differ from a forward b) tunnel in mobile IP protocol?
 - What is IMT 2000? c)
 - What is the purpose of WML? What are its d) characteristics? 3 + 4 + 2 + (3 + 3)
- 11. Write short notes on any one of the following: 1 ×15
 - Bluetooth protocol stack and its description. a)
 - b) Global star satellite system.
 - Personal communication service. c)

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