



Name :

Roll No. :

Invigilator's Signature :

CS / B. TECH (ECE-NEW) / SEM-8 / EC-804C / 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

(Multiple Choice Type Questions)

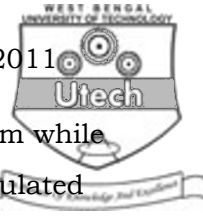
1. Choose the correct alternatives for the following : $10 \times 1 = 10$

i) FDMA is suitable for

- a) analog signal b) digital telephony
- c) long haul d) none of these.

ii) GSM uses

- a) circularly switched data
- b) polarized switched data
- c) packet switched data
- d) none of these.



- iii) Tunnel is the path followed by a datagram while
 - a) it is encapsulated b) decapsulated
 - c) may be anything d) not feasible.
- iv) In creation & deployment of End-user services (CADENUS) monitoring & measurement is performed at all interfaces between the
 - a) mediators b) agents
 - c) resources d) none of these.
- v) AQUILA (Adaptive Resource control for QOS using an IP based layered architecture) performs global management of the resources via the
 - a) resource control agent (RCA)
 - b) IAM
 - c) ICC
 - d) none of these.
- vi) RCA monitors control and distribute the
 - a) resources in the network
 - b) AI
 - c) resources
 - d) none of these.
- vii) TEQUILA performs dynamic administration control, as well as
 - a) policy management
 - b) attack management
 - c) dynamic route & resource management
 - d) none of these.



- viii) Temporary ordered Routing Algorithm is suitable for
- a) large & dense population of nodes
 - b) PON
 - c) Poling management
 - d) none of these.
- ix) Bluetooth base band protocol is a combination of
- a) circuit & packet switching
 - b) circuit & message switching
 - c) both of these
 - d) none of these.
- x) 4th generation communication network has
- a) mobile nodes
 - b) fixed nodes
 - c) combination of (a) and (b)
 - d) not specific.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. What is direct sequence spread spectrum technology ?
Explain its working in CDMA technology. $2 + 3$
3. Explain Agent discovery, registration & tunneling in mobile IP Protocol.
4. What are the main components in RCL architecture ? How will you design a UMTS router output port ? $2 + 3$



5. What are HLR & VLR ? Describe the function of HLR & VLR in call routing and roaming ? 2 + 3
6. What are the advantages & disadvantages of wireless LAN ?

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. 3 × 15 = 45

7. Explain different proactive & reactive protocols used in MANET. Discuss passive & active attacks to MANET. 10 + 5
8. Compare mobile IPV4 & mobile IPV6. What are triangular routing & ingress filtering ? State the principle of location update in mobile IPV6. 6 + 6 + 3
9. a) What are the features of WML ?
b) Discuss a Bluetooth protocol stack.
c) Explain the general structure of broker & agent implementation. 5 + 5 + 5
10. What is the basic access method related to CSMA/CA ? Discuss the mechanism behind it. 3 + 12
11. Write short notes on any *three* of the following : 3 × 5 = 15
- a) Mobile agent based resource reservation
 - b) Voice across the internet
 - c) HyperLAN & Home RF
 - d) GSM Network
 - e) Working principle of GPRS Network.

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