



KINGS

COLLEGE OF ENGINEERING
Punalkulam



DEPARTMENT OF INFORMATION TECHNOLOGY
QUESTION BANK

Subject Code : IT1402

Subject Name : Mobile Computing

Year / Sem : IV / VII

UNIT I
PART – A (2MARKS)

- 1 .What are the 3 fundamental propagation behaviors depending on their frequency?
- 2 .what is multipath propagation?
- 3 .What is guard space?
- 4 .What are the 3 different basic schemes analog modulation?
- 5.What is the use of Phase Lock Loop(PLL)?
- 6.What is hopping sequence?
7. What is dwell time?
8. What are the advantages of cellular systems?
9. What is browsing channel allocation and fixed channel allocation?
10. What are the disadvantages of cellular systems?
11. What is digital sense multiple access?
12. What is Network and Switching subsystem?
13. What is authentication centre?
14. What is called burst and normal burst?
15. What are the basic groups of logical channels?
16. Define traffic multiframe and control multiframe?

17. What is OVSF?
18. Specify the steps perform during the search for a cell after power on?
19. Explain about transparent mode?
20. What are the basic classes of handovers?

PART – B (16 MARKS)

1. Discuss briefly the multiplexing techniques.
2. Explain about the signal propagation.
3. Discuss about the cellular system.
4. List the difference between S/T/F/CDMA.
5. What is spread spectrum with its types.
6. Explain about the TDMA.
7. Why CDMA is needed and explain it with an example?
8. Why do MAC scheme in wired network fail in wireless networks and how dose the multiple access with collision avoidance (MACA) scheme work.
9. Define modulation and explain the method for analog modulation techniques in details.
10. Discuss briefly the code division multiplexing techniques.
11. Discuss briefly the advanced phase shift keying.

UNIT-II
PART – A (2 MARKS)

1. Specify the security services offered by GSM.
2. What is the frequency range of uplink and downlink in GSM network?
3. What are the two basic groups of logical channels in GSM?
4. What are the control channel groups in GSM?
5. List out the numbers needed to locate an MS and to address the MS.
6. What are the four possible handover scenarios in GSM?
7. What are the security services offered by GSM?
8. What is meant by GGSN?

9. What is meant by SGSN?
10. What is meant by BSSGP?
11. Define the protocol architecture of DECT.
12. Specify the standards offered by TETRA.
13. How many ITU standardized groups of 3G radio access technologies are there in IMT-2000?
14. What are the steps perform during the search for a cell after power on?
15. What are the two basic classes of handover?
16. What are the two basic transport mechanisms used by DAB?
17. What are the two transport modes defined for MSC?
18. Define the terms:
 - i. Earth Station.
 - ii. Uplink.
19. Define Elevation Angle.
20. What are the factors limited the number of sub channels provided within the satellite channel?

PART – B (16 MARKS)

1. Explain GSM architecture.
2. Explain Satellite networks in detail.
3. Write short notes on DAB.
4. Write short notes on DVB
5. Explain DECT.
6. Explain in details the functioning of GPRS.
7. Compare GEO, MEO and LEO

UNIT-III

PART – A (2 marks)

1. What are the advantages of WLANS?
2. Mention some of the disadvantages of WLANS?
3. Mention the design goals of WLANS?
4. What is the difference between infrastructure and ad-hoc networks?
6. Mention the features of infrared transmission?
7. What are the disadvantages of infrared transmission?
8. Mention the features of radio transmission?
9. What are the disadvantages of radio transmission?
10. Define frequency hopping spread spectrum?
11. Define random back off time?
12. What is Traffic Indication Map?
13. What is Delivery Traffic Indication Map?
14. What is Ad-hoc TIM?
15. What is meant by roaming?
16. Mention the features of HIPERLAN1?
17. What are the three phases of medium access in EY-NPMA?
18. Mention the elements of Bluetooth core protocols?
19. What is the purpose of sniff state?
20. What is the use of hold state?
21. What is the purpose of park state?

PART – B (16 MARKS)

1. Explain the architecture and features of IEEE 802.11 in details.
2. Explain the MAC layer in IEEE802.11.
3. Explain HIPERLAN in detail.
5. Write short notes on Bluetooth.
6. Explain the service offered by IEEE802.11 standard.
7. Explain how power management is done in IEEE 802.11 infrastructure based and ad hoc networks.
8. Discuss how to increase the quality of service in an ad hoc network.

UNIT IV

PART – A (2 MARKS)

1. What are the requirements of mobile IP?
2. Mention the different entities in a mobile IP.
3. What do you mean by mobility binding?
4. Define a tunnel.
5. What is encapsulation?
6. What is decapsulation?
7. Define an outer header
8. Define an inner header.
9. What is meant by generic routing encapsulation?
10. What is the use of network address translation?
11. Define triangular routing.
12. What is meant by a binding cache?
13. Define binding request.
14. What is known as Binding update?

15. Explain binding acknowledgement.
16. Define binding warning.
17. Explain cellular IP.
18. What are the advantages of cellular IP?
19. What is known as mobility anchor point?
20. Explain destination sequence distance vector routing.
21. What are the two things added to the distance vector algorithm?
22. How the dynamic source routing does divide the task of routing into two separate problems?

PART – B (16 Marks)

1. a. What are the requirements of a mobile IP? (8)
b. Describe Dynamic host configuration protocol. (8)
2. a. Discuss the routing algorithm in ad-hoc network (8)
b. What are the entities in mobile IP? (8)
3. a. Discuss how optimization is achieved in mobile IP (8).
b. Explain tunneling and encapsulation in mobile IP. (8)
4. Explain how dynamic source routing protocols handles routing with an example (16)

UNIT-V
PART – A (2 MARKS)

1. What is slow start?
2. What is the use of congestion threshold?
3. What led to the development of Indirect TCP?
4. What is the goal of M-TCP?
5. What do you mean by persistent mode?
6. What are the characteristics of 2.5G/3.5G wireless networks?
7. What are the configuration parameters to adapt TCP to wireless environments?
8. State the requirements of WAP.
9. Name the layers of WAP.
10. Name some ICMP messages.
11. What is WTP? What are its classes?
12. What is WSP?
13. Name some features of WSP adapted to web browsing.
14. What is WML?
15. What are the features of WML?
16. What are the advantages of WML Script over WML?
17. Name the libraries specified by WML Script.
18. What are the classes of libraries?
19. Name the operations performed by PAP.
20. What are the components of WAP2.0?

PART – B (16 MARKS)

1. Explain traditional TCP in details.
2. Explain classical TCP improvements and snooping TCP.
3. Explain the function of the components of the WAP architecture.
4. Explain the concept of wireless markup language.
5. Explain wireless application protocols with the it's version WAP 2.0in detail.
6. Describe the operation of the window flow control mechanism.