

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
Academic Year: 2015-16  
QUESTION BANK - EVEN SEMESTER

<b>NAME OF THE SUBJECT</b>	<b>MOBILE COMPUTING</b>
<b>SUBJECT CODE</b>	IT6601
<b>SEMESTER</b>	VI
<b>YEAR</b>	III
<b>DEPARTMENT</b>	COMPUTER SCIENCE AND ENGINEERING
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UNIT -I  
PART-A

Q.No	Question	Competence	Level
1	Define Mobile computing?	Remember	BTL1
2	List the wireless networking standards used in Mobile computing?	Remember	BTL1
3	Differentiate between Mobile Computing and Wireless Networking.	Understand	BTL2
4	List the applications of Mobile Computing	Remember	BTL1
5	Pointout in what way mobile computing is useful to our society?	Analyze	BTL4
6	Give the challenges in Wireless Communication.	Understand	BTL2
7	Define MAC Protocol.	Remember	BTL1
8	List the issues of Wireless MAC Protocol	Remember	BTL1
9	Pointout the problems faced by devices in Wireless Transmission?	Remember	BTL4
10	What is the use of Ad-Hoc networks?	Remember	BTL1
11	Classify the MAC Protocol.	Apply	BTL3
12	Classify the different types of wireless networks?	Analyze	BTL4
13	Distinguish between infrastructure-based network and infrastructure less network.	Understand	BTL2
14	Describe the function of presentation, application and data tier of mobile Environment.	Understand	BTL2
15	Show the role of a MAC protocol.	Remember	BTL3
16	Classify Hidden Terminal and Exposed Terminal Problem with the help of a diagram.	Remember	BTL3
17	Compose a role which is played by Radio/Infrared signals play in Mobile Computing?	Create	BTL6

18	Assess why is the MAC protocol designed for infrastructure based wireless N/W may not work satisfactory in infrastructure-less environment. Justify your answer	Evaluate	BTL5
19	Develop a MACA Protocol? In which environment is it suitable? Justify your answer	Analyze	BTL6
20	Formulate a reason why Collision Detection is based protocol not suitable for wireless networks?	Evaluate	BTL6

PART-B

Q.No	Question	Competence	Level
1	Explain in detail about Mobile Computing Classify its various applications in the real world scenario.	Analyze	BTL4
2	(i) Describe the various random assignment schemes that are used in MAC protocol. (ii) Predict the various Fixed assignment schemes. (iii) Discuss the various Reservation Based schemes.	Remember	BTL2
3	Summarize the issues of Wireless MAC Protocols.	Understand	BTL5
4	Demonstrate the working of contention based MAC Protocols.	Apply	BTL3
5	Identify the use of MAC Protocols. How do MAC protocol for Wireless networks differ from wired network? Justify your Statement.	Evaluate	BTL1
6	Prepare a brief account of scheduled based MAC protocol. Name any one scheduled based MAC protocol.	Create	BTL6
7	Describe in detail about TDMA, FDMA, CDMA and tabulate the difference among them.	Remember	BTL2
8	Classify the MAC protocols. Specify any one category of your choice and give an example.	Analyze	BTL3
9	Describe the role of pseudorandom generator in the working of CDMA Protocol.	Understand	BTL1
10	Define the following terms:- (i) Presentation Tier (ii) Application tier (iii) Data Tier in a Mobile Computing Environment.	Remember	BTL1

UNIT -II

PART-A

Q.No	Question	Competence	Level
1	Define Mobile IP.	Remember	BTL1
2	What do you mean by agent solicitation?	Remember	BTL1
3	Express about encapsulation?	Understand	BTL2
4	What do you mean by the term binding of mobile node?	Remember	BTL1
5	Predict the functions of DHCP?	Remember	BTL2
6	Differentiate between Traditional IP and Mobile IP?	Understand	BTL2
7	Formulate a plan to create mobile IP along with basic requirements ?	Create	BTL6
8	What do you know about 'agent discovery'?	Understand	BTL1
9	Define Tunnelling.	Understand	BTL1
10	Differentiate between Tunneling and reverse Tunneling	Remember	BTL2
11	Point out the need for mobile IP? Justify your statement.	Analyze	BTL4
12	Define COA?	Remember	BTL1
13	Explain indirect TCP model with a neat diagram	Analyze	BTL4
14	Illustrate about congestion control?	Understand	BTL 3
15	Illustrate about mobile TCP?	Understand	BTL 3
16	Develop a solution to reduce the congestion in a mobile network.	Create	BTL 6
17	Assess why does Congestion occur in a network?	Evaluate	BTL 5
18	Pointout the meaning of 'Slow Start' in Mobile Computing?	Remember	BTL 4
19	Assess the term 'Mobile Node'.	Remember	BTL 5
20	Demonstrate the advantage and disadvantages of Mobile TCP.	Remember	BTL 3

PART-B

Q.No	Question	Competence	Level
1	<b>Define</b> Short Notes on :- a) Home Address b) Mobile Node c) Foreign Agent d) Foreign Network e) Home Network	Analyze	BTL 1
2	<b>Discriminate</b> in detail about traditional IP. How does it differs from Mobile IP? Why cannot the traditional IP be used in the mobile network. In what way does mobile IP support mobile Hubs?	Evaluate	BTL 5
3	<b>Describe</b> the following terms in detail: a) Corresponding Node b) Care of Address c) Agent Discovery d) Tunneling and Encapsulation	Remember	BTL1
4	<b>Demonstrate</b> the working of mobile IP with the help of a diagram.	Apply	BTL3
5	<b>Express</b> brief account of route optimization in Mobile IP	Understand	BTL2
6	a) <b>Examine</b> the reason why congestion occurs in a network? Explain how does TCP detect and handle congestion. b) <b>Classify</b> the working of freeze-TCP.	Apply	BTL3
7	Explain the layered architecture of the TCP/IP protocol suite and compare it with the ISO/OSI architecture.	Analyze	BTL4
8	<b>Summarize</b> slow start in TCP operation? Explain its working. How does slow start help improve the performance of TCP?	Understand	BTL2
9	<b>Quote</b> I-TCP and Explain Indirect TCP(I-TCP) with the help of a suitable schematic diagram.	Remember	BTL1
10	<b>Modify</b> the normal TCP to M-TCP for working efficiently in wireless Mobile Network.	Create	BTL6

UNIT –III  
PART-A

Q.No	Question	Competence	Level
1	Define GSM.	Remember	BTL1
2	Tabulate the services of GSM?	Remember	BTL1
3	Show the importance of GPRS	Understand	BTL3
4	Explain in what ways is GPRS better than GSM?	Evaluate	BTL 5
5	Define UMTS.	Remember	BTL1
6	Classify the functions of HLR and VLR?	Understand	BTL3
7	Differentiate between a GSM network and UMTS network.	Understand	BTL2
8	Give the Functions of GGSN?	Understand	BTL 2
9	Quote BSS .	Remember	BTL 1
10	Discuss about BTS.	Understand	BTL 2
11	Express about BSC.	Understand	BTL 2
12	Pointout the purpose of EIR in Mobile Computing?	Analyze	BTL 4
13	Define OMC.	Remember	BTL 1
14	Classify the major functions in RSS?	Analyze	BTL 4
15	Create different ways to develop anonymity?	Create	BTL 6
16	Discriminate between UMTS networks and 2G networks.	Evaluate	BTL 5
17	Show the differences between 1G, 2G,3G Cellular Networks?	Understand	BTL 3
18	Explain the importance of VHE.	Analyze	BTL 4
19	Formulate the various services of GSM	Create	BTL 6
20	Define Call Routing.	Remember	BTL 1

PART-B

Q.No	Question	Competence	Level
1	<b>Explain</b> in detail about GPRS architecture.	Analyze	BTL 5
2	<b>Describe</b> about the system architecture of Global System for Mobile Communication.	Remember	BTL 1
3	<b>Show</b> how a GSM network Provides security to the customers.	Apply	BTL 3
4	<b>Demonstrate</b> briefly about VHE. In what way is VHE is applied in 3G networks?	Apply	BTL 3
5	<b>What if</b> Mobile phones have an effect on the human body? Justify Your statement.	Create	BTL 6
6	<b>Describe</b> in detail about GPRS procedures in detail.	Remember	BTL 1
7	<b>Classify</b> briefly about the various categories of GSM services.	Analyze	BTL 4
8	<b>Summarize</b> UMTS. Describe the functions of HLR and VLR in call routing and roaming?	Understand	BTL 2
9	<b>Describe</b> how the mobile cellular communication has evolved over the generation of technology.	Analyze	BTL 1
10	<b>Summarize</b> 1G,2G,3G cellular networks in detail.	Understand	BTL 2



UNIT -IV  
PART-A

Q.No	Question	Competence	Level
1	Define an ad hoc network?	Remember	BTL1
2	Show the applications of MANETs.	Remember	BTL3
3	Summarize the characteristics of MANETs.	Understand	BTL5
4	Examine the requirement for Ad-Hoc Networks for its working?	Apply	BTL3
5	Explain the MANET routing algorithms?	Analyze	BTL4
6	Prepare the differences between VANET and traditional MANET?	Analyze	BTL6
7	Give a comparison between DSDV and DSR.	Evaluate	BTL5
8	Analyze about the term 'CGSR'.	Analyze	BTL4
9	Express dynamic source routing(DSR).	Understand	BTL2
10	Summarize about MANETs. Security.	Understand	BTL2
11	What are the advantages in DSR ?	Remember	BTL1
12	Differentiate between MANET routing strategies with routing strategies of traditional networks.	Analyze	BTL4
13	Quote dynamic topology of MANET?	Remember	BTL1
14	Compose cellular network and wireless LAN to be considered as ad hoc networks? Justify your answer.	Create	BTL6
15	Interpret the count to infinity problem.	Understand	BTL2
16	List the two types of communication in a MANET?	Remember	BTL1
17	What is hybrid routing protocol?	Remember	BTL1
18	Identify the issues that are addressed by routing protocol in MANET?	Remember	BTL1
19	Give some popular Routing Protocols.	Understand	BTL2
20	Show Why traditional routing strategies cannot be deployed in a MANET?	Apply	BTL3

PART-B

Q.No	Question	Competence	Level
1	Discuss DSDV routing in detail with a neat diagram.	Understand	BTL2
2	Illustrate DSR routing in detail and compare with DSDV.	Understand	BTL3
3	Demonstrate how multicast routing is carried out in ad-hoc networks.	Apply	BTL3
4	Formulate, What are problem does dynamic topology cause in the design of routing protocol? How are these problem addressed in a popular MANET routing protocol?	Create	BTL6
5	Evaluate why traditional packet routing protocol for wired network cannot be used straightaway in a MANET. Discuss how the routing protocols	Evaluate	BTL5
6	Describe at least three applications of Mobile Ad-Hoc Networks.	Understand	BTL 2
7	Define VANET? Explain how does it differ from MANET? Explain any one application of VANET.	Evaluate	BTL 1
8	Describe about size and node density of MANET? Explain any two terms and conclude how these two parameters impact the design of MANET.	Evaluate	BTL 1
9	Point out any one routing techniques that can be used in mobile ad hoc networks.	Analyze	BTL 4
10	Define short notes on: a) Characteristics of a secure ad hoc network. b) Security attacks in ad hoc networks.	Remember	BTL 1





PART-A

Q.No	Question	Competence	Level
1	What is microkernel operating system?	Remember	BTL1
2	Express three commercial operating system for mobile phones.	Remember	BTL2
3	Differentiate the operating system for mobile phone different from the operating system for desktop?	Understand	BTL2
4	Show the advantages of mobile operating system?	Evaluate	BTL3
5	What are the disadvantages in the context of the design of mobile operating system?.	Remember	BTL1
6	Rank the uses of mobile payment system.	Evaluate	BTL5
7	List applications of M-commerce.	Remember	BTL1
8	Summarize in a short way about BTL2B and BTL2C commerce.	Evaluate	BTL5
9	Express micropayment in M-Commerce.	Understand	BTL2
10	Define one different payment system are available in M-Commerce.	Remember	BTL1
11	Show why microkernel preferred for developing a mobile OS?	Apply	BTL3
12	List the different versions of Android.	Remember	BTL1
13	Give the drawbacks of Symbian os.	Remember	BTL2
14	Give any two features of window Phone.	Remember	BTL2
15	Describe UIQ interface.	Understand	BTL2
16	Develop android software stack with neat diagram.	Create	BTL6
17	Describe the features of Blackberry operating system.	Understand	BTL2
18	Differentiate between Android, Symbian OS, Windows phone 7.	Analyze	BTL4
19	Locate a structure of sensor operating system.	Create	BTL6
20	Differentiate between OS for sensor Network with Traditional OS.	Analyze	BTL 4

PART-B

Q.No	Question	Competence	Level
1	Assess the special features that an operating system for mobile device needs to support compared to the features provided by a traditional operating system	Evaluate	BTL5
2	Describe microkernel operating system. Why is microkernel based design being preferred for developing a mobile OS?	Understand	BTL2
3	Explain the principle functions of the operating system of a mobile device. Discuss how an example application can be implemented on a mobile device and the specific operating system service that it make use of.	Analyze	BTL4
4	Illustrate about Ad-Hoc basic concepts.	Analyze	BTL3
5	Describe briefly the architecture of the Andriod operating system. Briefly identify the possible reasons as to why it has been able to rapidly improve its market share compared to its peers since its introduction few years ago.	Understand	BTL1
6	Illustrate with at least one suitable example, explain the flexibilities that a user would be required to sacrifice when a single tasking operating system is used in the mobile device.	Create	BTL3
7	Illustrate some of the security issues in Mobile Payment Systems.	Understand	BTL3
8	Describe mobile payment system? Examine an application where mobile payment may be useful. Explain the different payment systems that are available.	Apply	BTL3
9	a) What do you understand by M-commerce? Explain the advantages and disadvantages of M-commerce? Identify the situation where micropayments are essential and how it can be achieved?	Create	BTL1
10	Compose a definition for BTL2B and BTL2C commerce? When are these techniques used and where it is used. Describe with an example.	Analyze	BTL6

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