SRM VALLIAMMAI ENGINEERING COLLEGE

(An Autonomous Institution)

SRM Nagar, Kattankulathur – 603 203

DEPARTMENT OF INFORMATION TECHNOLOGY

QUESTION BANK

VI SEMESTER

1908601-Mobile Communication

Regulation – 2019

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<u>QUESTION BANK</u>

SUBJECT   : 1908601 – Mobile Communication

SEM / YEAR: VI Sem / III Year

UNIT I - INTRODUCTION			
Introduction to Mobile Computing – Applications of Mobile Computing- Generations of Mobile Communication Technologies-MAC Protocols – SDMA- TDMA- FDMA- CDMA			
PART – A			
Q.No	**Questions**	**BT Level**	**Competence**
1.	Define Mobile computing.	BTL1	Remembering
2.	List the advantages of mobile computing.	BTL1	Remembering
3.	Distinguish between Mobile Computing and Wireless Networking.	BTL2	Understanding
4.	Recall the wireless networking standards used in Mobile computing.	BTL1	Remembering
5.	Distinguish between infrastructure-based network and infrastructure less network.	BTL2	Understanding
6.	Analyze the challenges in Wireless Communication.	BTL4	Analyzing
7.	Classify the types of wireless networks.	BTL3	Applying
8.	Illustrate Ad hoc Networks with pictorial representation.	BTL3	Applying
9.	Give the uses of Ad-Hoc networks.	BTL2	Understanding
10.	What are the limitations of Mobile computing?	BTL1	Remembering
11.	List the issues of wireless MAC.	BTL4	Analyzing
12.	Describe the function of presentation, application and data tier of mobile environment.	BTL2	Understanding
13.	What is the role of a MAC protocol?	BTL1	Remembering
14.	Classify the types of MAC Protocol.	BTL3	Applying
15.	List some random assignment scheme.	BTL1	Remembering
16.	Inspect hidden and exposed terminal problems in infrastructure-less network.	BTL4	Analyzing
17.	When does the exposed terminal problem arise? Compose a role which is played by Radio/Infrared signals play in Mobile Computing?	BTL6	Creating
18.	"MAC protocol designed for infrastructure based wireless network may not work satisfactory in infrastructure-less environment"-Justify.	BTL5	Evaluating
19.	Formulate a reason why Collision Detection based protocol is not suitable for wireless networks?	BTL6	Creating

20.	Evaluate the working of RTS/CTS in MACA.	BTL5	Evaluating
21.	Find the difference between Circuit switching and packet switching.	BTL1	Remembering
22.	Infer some cellular phone standards.	BTL2	Understanding
23.	Which TDMA scheme is suitable for satellite system?	BTL3	Applying
24.	Identify the problems faced by devices in wireless transmission.	BTL4	Analyzing
PART-B			
1.	(i) What is Mobile Computing? Explain its applications in the real world scenario. (7) (ii) Differentiate between mobile computing and wireless networking. (6)	BTL4	Analyzing
2.	(i) Classify the generations of mobile communication technologies. (8) (ii) Apply mobile computing to design Taxi dispatcher and monitoring service. Explain the components in detail. (5)	BTL4	Analyzing
3.	(i) Explain hidden and exposed terminal problem in infrastructure-less network. (7) (ii) Describe architecture of mobile computing.(6)	BTL1	Remembering
4.	(i) Describe the important functional difference between 1G, 2G and 3G cellular networks.(8) (ii) Is 3G cellular wireless technology superior to 2G technology? Justify your answer. (5)	BTL1	Remembering
5.	Explain the various taxonomy of MAC protocols in detail. (13)	BTL3	Applying
6.	(i) Explain the wireless MAC issues in detail. (7) (ii) Illustrate the working of SDMA and gives its application. (6)	BTL2	Understanding
7.	What are the fixed assignment schemes of MAC protocol? Explain their mechanism in detail. Compare and contrast them. (13)	BTL1	Remembering
8.	Differentiate between FDMA, TDMA and CDMA. (13)	BTL1	Remembering
9.	Discuss the basic scheme of the CDMA protocol. (13)	BTL2	Understanding
10.	(i) What are the principle responsibilities of the MAC Protocol? (6) (ii) How does MAC protocol for wireless networks differ from those in wired network? (7)	BTL2	Understanding
11.	Explain the various random assignment schemes that are used in MAC protocol. (13)	BTL3	Applying
12.	What is MACA protocol? In which environment is it suitable? Briefly explain its working. (13)	BTL4	Analyzing
13.	Explain why MAC scheme in wired network fail in wireless networks. (13)	BTL5	Evaluating
14.	Name any one scheduled based MAC protocol and explain in detail. (13)	BTL6	Creating
15.	Explain in detail about various technologies of mobile computing. (13)	BTL2	Understanding
16.	(i) What is CSMA? What are the categories of CSMA? Explain their working with advantages and disadvantages.(7) (ii) Compare the characteristic feature of TDMA, CDMA and FDMA mechanisms.(6)	BTL3	Applying
17.	(i)Why CDMA is needed and explain it with an example. (6) (ii)Explain in detail multiple access with Collision Avoidance scheme. (7)	BTL5	Evaluating
PART – C			
1.	Prepare a brief account of scheduled based MAC protocol. (15)	BTL 6	Creating
2.	(i) Compare 1G and 2G cellular wireless communication technologies. (8) (ii) What do you understand by 2.5G? How is it different from 2G and 3G technologies? (7)	BTL 5	Evaluating

3.	How does MACA protocol solve the hidden/exposed terminal problem? (15)	BTL 5	Evaluating
4.	How does the multiple accesses with collision avoidance (MACA)scheme work? (15)	BTL 5	Evaluating
5.	Consider the following scenarios: (i) Node A and c wants to transmit data to B at the same time. (ii) Node B transmits daa to node a meanwhile Node C wants to transmit data to node D in the network. Identify the problems during this data transmission. Explain it. Suggest a method of your choice to overcome this problem. (15)	BTL 6	Creating

UNIT II - MOBILE TELECOMMUNICATION SYSTEM

GSM – Architecture – Protocols – Connection Establishment – Frequency Allocation – Routing – Mobility Management – Security –GPRS- UMTS- Architecture

PART – A

Q.No	Questions	BT Level	Competence
1.	Is 3G cellular wireless technology superior to 2G technology? Justify your answer.	BTL5	Evaluating
2.	Identify the characteristics of 4G and 5G Cellular Networks.	BTL3	Applying
3.	List the 3 important features of GSM security.	BTL1	Remembering
4.	Summarize the following. MSC and BSC.	BTL2	Understanding
5.	Experiment with Call Routing.	BTL3	Applying
6.	Name the Teleservices provided by GSM.	BTL1	Remembering
7.	What is the frequency range of uplink and downlink in GSM network?	BTL1	Remembering
8.	Describe the function of HLR and VLR.	BTL2	Understanding
9.	What is multicasting?	BTL1	Remembering
10.	Point out the major functions in NSS.	BTL4	Analyzing
11.	Analyse the need for EIR.	BTL4	Analyzing
12.	Define GPRS and list its services.	BTL2	Understanding
13.	Give the Functions of GGSN?	BTL2	Understanding
14.	What are the information are stored in SIM?	BTL1	Remembering
15.	GPRS is advantageous than GSM. Justify the statement.	BTL5	Evaluating
16.	Generalize the limitations of GPRS.	BTL6	Creating
17.	What are the main elements of UMTS?	BTL1	Remembering
18.	Define Handoff. What are its types?	BTL4	Analyzing
19.	Can UMTS networks easily work with the existing GSM/GPRS networks? Justify your answer.	BTL3	Applying
20.	Write the suggestions of mobile phone with respect to human body.	BTL6	Creating
21.	Recall the purpose of HLR.	BTL1	Remembering
22.	Compare soft and hard handoff	BTL2	Understanding
23.	Identify the reasons for handover?	BTL3	Applying
24.	Discover a model to illustrate the effect of handoff.	BTL4	Analyzing

PART-B

1.	(i) Describe GSM architecture and its services in detail. (7) (ii) Explain GSM Authentication and Security. (6)	BTL2	Understanding
2.	Identify the services offered by GSM and explain in detail. (13)	BTL3	Applying
3.	Analyze the purpose of radio interface U_m in GSM. (13)	BTL4	Analyzing

4.	Explain the protocol architecture for signaling in GSM. (13)	BTL5	Evaluating

5.	(i) Recall the terms
	    a. MSISDN (2)
	    b. IMSI (2)
	    c. TMSI (2)
	    d. MSRN (2)
	(ii) Show the procedure for MTC and MOC. (5)
		BTL1	Remembering

6.	Examine in detail about the various types of handover in GSM. Also discuss the timeline diagram of the Intra MSC handover. (13)	BTL4	Analyzing
7.	Elaborate frequency allocation with its various methods.(13)	BTL6	Creating
8.	(i) Describe the GPRS architecture reference model. (7) (ii) State its Advantages and Disadvantages. (6)	BTL1	Remembering
9.	Explain the functions of GPRS protocol stack with a diagram. (13)	BTL2	Understanding
10.	(i) Discuss the services of GPRS. (7) (ii) What are the advantages of GPRS over GSM? (6)	BTL1	Remembering
11.	What do you mean by Virtual Home Environment (VHE)? Identify how VHE is realized in 3G networks? (13)	BTL3	Applying
12.	Explain in detail network architecture of UMTS with a neat diagram. (13)	BTL2	Understanding
13.	Recall the two basic classes of handovers in UMTS. (13)	BTL1	Remembering
14.	What is UMTS? Analyze the functions of HLR and VLR in call routing & roaming? (13)	BTL4	Analyzing
15.	(i) Explain the message flow between mobile station and BTS during mobile originated call with suitable illustrations. (7) (ii) Explain security services of GSM system. (6)	BTL2	Understanding
16.	Explain about inter cell and intra cell handovers in GSM ? (13)	BTL3	Applying
17.	(i) Explain about MOT and MTO in GSM. (7) (ii) Discuss about the interfaces in UMTS. (6)	BTL5	Evaluating
	PART-C		
1.	Determine what are the functions of authentication and encryption in GSM?How is system security maintained? (15)	BTL 5	Evaluating
2.	Do mobile phones affect the human body negative? Explain your answer. (15)	BTL 5	Evaluating
3.	Assess the applications of GPRS with its advantages and disadvantages. (15)	BTL 5	Evaluating
4.	Discuss the domains and interfaces of Universal Mobile Telecommunication System. (15)	BTL 6	Creating
5.	GSM allows a subscriber to move throughout the coverage area with a capability to make or receive calls. Sketch the components involved in make or receive calls in roaming. (15)	BTL 6	Creating

UNIT III - WIRELESS NETWORKS

Wireless LANs and PANs – IEEE 802.11 Standard – Architecture – Services – Blue Tooth- Wi-Fi – WiMAX

PART – A

Q.No	Questions	BT Level	Competence
1.	What is WLL?	BTL1	Remembering
2.	What is the advantage of infra-red technology?	BTL1	Remembering
3.	Give examples for mobile adhoc networks.	BTL2	Understanding
4.	What is the format of frame control field of 802.11 MAC packet structure?	BTL1	Remembering
5.	Define Ad hoc wireless network with example.	BTL2	Understanding
6.	Differentiate between Wi-Fi and WiMAX.	BTL4	Analyzing

7.	Why is WiMAX forum formed?	BTL3	Applying
8.	Identify why wireless LAN services are of lower quality than wired LAN.	BTL3	Applying
9.	Compare wired networks and adhoc wireless networks based on routing.	BTL2	Understanding
10.	What are the three low power states of a Bluetooth state?	BTL1	Remembering
11.	Why cannot wireless LANs implement CSMA/CD?	BTL4	Analyzing
12.	Mention the design goals of WLANs.	BTL2	Understanding
13.	What is the difference between infrastructure and ad-hoc networks?	BTL1	Remembering
14.	Identify the design goals of 802.11.	BTL3	Applying
15.	What is piconet? What restricts the number of active devices in a piconet?	BTL1	Remembering
16.	Inspect the advantages of WLANs.	BTL4	Analyzing
17.	Propose the elements of Bluetooth core protocols.	BTL6	Creating
18.	Compare infra-red and radio transmission.	BTL5	Evaluating
19.	Imagine the user scenarios for WPANs.	BTL6	Creating
20.	Evaluate the criteria's under which WPAN is discussed using IEEE 802.11.	BTL5	Evaluating
21.	List the services provided by IEEE802.11.	BTL1	Remembering
22.	State the various standards in Wireless PANs.	BTL2	Understanding
23.	List the applications of Wi-Fi.	BTL3	Applying
24.	Assess the elements in core protocols in Bluetooth?	BTL4	Analyzing
PART-B			
1.	(i) Explain the system architecture of IEEE 802.11. (7) (ii) Analyze HiperLAN architectural components and their interactions. (6)	BTL4	Analyzing
2.	Explain the IEEE 802.11 MAC management. (13)	BTL1	Remembering
3.	Describe Bluetooth in detail. (13)	BTL1	Remembering
4.	(i) Explain the various IEEE 802.11 standards in detail. (7) (ii) Explain the services offered by IEEE 802.11 standard. (6)	BTL2	Understanding
5.	(i) Explain the features of HiperLAN. (7) (ii) Explain WLL in detail. (6)	BTL2	Understanding
6.	(i) Explain contention free access using polling mechanism in IEEE 802.11. (8) (ii)Explain the protocol stack of Bluetooth. (5)	BTL2	Understanding
7.	(i) Briefly explain about features and applications of ad-hoc networks. (7) (ii)Explain how power management is done in IEEE 802.11 infrastructure architecture. (6)	BTL4	Analyzing
8.	Explain the working principle of the MAC layer of Bluetooth. (13)	BTL1	Remembering
9.	(i) Why is the physical layer in IEEE 802.11 subdivided? Discuss.(7) (ii)Can a network be wireless, but not mobile? Discuss. (6)	BTL4	Analyzing
10.	(i) Model the architecture of WiFI in detail. (7) (ii) Describe the architecture of WiMAX in detail. (6)	BTL3	Applying
11.	Identify the system and protocol structure of 802.16 standard. (13)	BTL3	Applying
12.	Elaborate on mobile ad-hoc networks. (13)	BTL6	Creating
13.	(i) With a suitable diagram explain the extended service set. (7) (ii) Discuss the advantages and disadvantages of WLAN. (6)	BTL1	Remembering
14.	Briefly explain about features and applications of adhoc networks. (13)	BTL5	Evaluating
15.	(i) Draw the schematic for the physical layer of IEEE802.11 infrared and explain. (7) (ii) Discuss with suitable diagram distributed coordination function with IEEE802.11 medium access control logic. (6)	BTL2	Understanding

16.	(i) What are the advantages and disadvantages of wireless LAN? Under what situation is a wireless LAN desirable over wired LAN. (7) (ii) List types of Wireless LAN. Also explain mobility in wireless LAN. (6)	BTL3	Applying
17.	(i) Explain the following protocol used in Bluetooth technology (a) Link Manager Protocol (2) (b) Logic Link Control and Adaption Protocol (2) (c) Service Discovery Protocol (2) (d) RFCOMM (1) (ii) How does a Bluetooth device discover a Bluetooth network? Describe the security principles in Bluetooth. (6)	BTL5	Evaluating

PART - C

1.	Compose the system and protocol architecture of IEEE 802.11 standard. (15)	BTL 6	Creating
2.	Interpret the two MAC sublayers defined by IEEE 802.11 standard and explain. (15)	BTL 5	Evaluating
3.	Inspect the functions of MAC & physical layer of IEEE 802.16 in detail. (15)	BTL 5	Evaluating
4.	Analyze the various types of HiperLANs. (15)	BTL 5	Evaluating
5.	Consider the following three different scenarios of designing a generic WLAN which takes into account the number of users and their activities rather than the size/ type of the business itself: • A smalloffice or a workgroup deployment • An enterprise deployment • A telecommuters deployment Identify the MAC layer mechanisms used to deploy successful WLAN that supports very fast, secure and scalable wireless network for the above scenario.	BTL 6	Creating

UNIT IV - MOBILE NETWORKLAYER

Mobile IP – DHCP – AdHoc– Proactive and Reactive Routing Protocols – Multicast Routing-Vehicular Ad Hoc networks (VANET) –MANET Vs VANET – Security

PART - A

Q.No	Questions	BT Level	Competence
1.	What is ad hoc network?	BTL1	Remembering
2.	Differentiate cellular with Ad Hoc networks.	BTL4	Analyzing
3.	List the characteristics of MANETs.	BTL1	Remembering
4.	Identify the issues that are addressed by routing protocol in MANET?	BTL1	Remembering
5.	What is Mobile IP?	BTL1	Remembering
6.	List the advantages in DSR.	BTL1	Remembering
7.	Compare AODV and DSR protocols.	BTL2	Understanding

8.	Name the entities in Mobile IP.	BTL2	Understanding
9.	What is IP-in –IP encapsulation?	BTL2	Understanding
10.	List the applications of MANET.	BTL1	Remembering
11.	Classify the agent discovery in mobile IP.	BTL3	Applying
12.	Compare minimal encapsulation and IP -in –IP encapsulation.	BTL3	Applying
13.	Relate the tunneling and mobile IP.	BTL3	Applying
14.	Distinguish Proactive and Reactive protocols.	BTL4	Analyzing
15.	Summarize about security issues in MANET.	BTL5	Evaluating
16.	Compare DSDV and DSR.	BTL5	Evaluating
17.	Outline the concept of RTT.	BTL2	Understanding
18.	Can cellular network and wireless LAN be considered as ad hoc networks? Justify.	BTL6	Creating
19.	Construct a VANET.	BTL6	Creating
20.	Analyze the types of attacks on adhoc networks.	BTL4	Analyzing
21.	What is the need for mobile IP?	BTL1	Remembering
22.	Differentiate the functionalities of a foreign agent and home agent.	BTL2	Understanding
23.	Apply the purpose of agent solicitation message?	BTL3	Applying
24.	What should be the value of TTL field in the IP packet of agent advertisement? Why?	BTL4	Analyzing
PART-B			
1.	(i) Explain Characteristics, Applications of MANET. (7) (ii) Explain DSR Routing Protocols in detail. (6)	BTL2	Understanding
2.	Explain about DHCP client initialization procedure. (6) What are reactive and proactive routing protocols ?Specify its advantages and disadvantages.(7)	BTL1	Remembering
3.	Explain the traditional routing protocols. (13)	BTL2	Understanding
4.	(i) What are multicast routing protocols? (7) (ii) What are reactive and proactive protocols? Specify its advantages and disadvantages. (6)	BTL1	Remembering
5.	(i)Briefly discuss about agent discovery in Mobile IP.(7) (ii)Describe in detail the registration procedure in Mobile IP.(6)	BTL1	Remembering
6.	(i) Analyze DSDV routing in detail. (7) (ii) Mention the advantages and Disadvantages of DSDV. (6)	BTL4	Analyzing
7.	Discuss route discovery and route maintenance mechanisms in DSR with illustrations. List its merits and demerits. (13)	BTL2	Creating
8.	Explain the design issues in MANET and the applications of adhoc network. (13)	BTL5	Evaluating
9.	(i) Illustrate the classification of unicast MANET Routing Protocols. (7) (ii) Explain how multicast routing is carried out in ad-hoc networks. (6)	BTL3	Applying
10.	(i) What are the security threats in a MANET? What are the factors responsible for limited security in MANETs? (6) (ii) For every layer of MANET protocol stack, show at least one type of security attack that exploits vulnerability at that layer. (7)	BTL3	Applying
11.	With a diagram explain about DHCP and its protocol architecture. (13)	BTL4	Analyzing
12.	Describe the architecture of VANET with a neat diagram. (13)	BTL1	Remembering
13.	Explain any two VANET routing protocol with an example. (13)	BTL4	Analyzing
14.	(i) Compare and contrast MANET vs VANET. (7) (ii) Discuss the various security and attacks on VANET. (6)	BTL2	Understanding

15.	With a neat diagram , explain how packet delivery to and from a mobile node is transferred through mobile IP. (13)	BTL2	Understanding
16.	(i) Describe the client server configuration of DHCP. (7) (ii) What are the main functions of DHCP? Why is DHCP needed? (6)	BTL3	Applying
17.	Illustrate DSR routing in detail and compare it with DSDV.(13)	BTL5	Evaluating

PART - C

1.	Consider the network given below. Here 'S' is source node and 'D' is target node. Illustrate the process of route discovery, route reply,data delivery and route caching using DSR. Explain the approach. (15) 	BTL 6	Creating
2.	Write the three approaches to support the IP micro-mobility.(15)	BTL 5	Evaluating
3.	Write short notes on: (i) Ad Hoc On-demand Distance Vector(AODV) (8) (ii) Zone Routing Protocol. (7)	BTL 5	Evaluating
4.	A major task of the designer of a wireless sensor network is prolonging the life of the network. Explain how this is achieved while designing a MANET.(15)	BTL 6	Creating
5.	Discuss with a neat diagram how apacket is delivered from a mobile node to another mobile node without losing its information during mobility of the nodes. (15)	BTL 5	Evaluating

UNIT V - MOBILE TRANSPORT AND APPLICATIONLAYER

Mobile TCP– WAP – Architecture – WDP – WTLS – WTP –WSP – WAE – WTA Architecture – WML

PART - A

Q.No	Questions	BT Level	Competence
1.	Mention the basic features of WML.	BTL2	Understanding
2.	Define Mobile TCP.	BTL1	Remembering
3.	List the advantages of M-TCP.	BTL1	Remembering
4.	What is WTLS?	BTL1	Remembering
5.	Name the classes of wireless transaction protocol.	BTL1	Remembering
6.	Write the features of WSP.	BTL2	Understanding
7.	What are the components of are in WAP?	BTL2	Understanding
8.	Write the applications of M-TCP.	BTL3	Applying
9.	Organize standard libraries for WML script.	BTL3	Applying
10.	Write a note on session management.	BTL3	Applying
11.	What is indirect TCP?	BTL4	Analyzing
12.	Analyze the mechanism of the Transmission Control Protocol.	BTL4	Analyzing
13.	Evaluate the service request structure of WTP class 0.	BTL5	Evaluating
14.	Compose the basic objective of WAP.	BTL6	Creating
15.	Draw the time sequence chart for WSP /B session termination.	BTL6	Creating
16.	Define wireless application environment.	BTL1	Remembering

17.	Where i-mode is used?	BTL1	Remembering
18.	Why we used SyncML?	BTL2	Understanding
19.	Examine the advantages of Snooping TCP.	BTL4	Analyzing
20.	Assess the transaction oriented TCP connection setup.	BTL5	Evaluating
21.	Recall how does mobile TCP maintain end to end semantics?	BTL1	Remembering
22.	Summarize the parameters of TR_Invoke.req primitive?	BTL2	Understanding
23.	Experiment with how can we extend basic WAE to WTA?	BTL3	Applying
24.	Infer the capabilities of WML script?	BTL4	Analyzing
PART-B			
1.	What is wireless markup language? Write its features. (13)	BTL1	Remembering
2.	Illustrate the classical TCP improvements. (13)	BTL2	Understanding
3.	Describe WSP/B over WTP. (13)	BTL1	Remembering
4.	Elaborately explain about Push architecture. (13)	BTL4	Analyzing
5.	(i) Interpret the WTP class 2 protocols. (7) (ii) Summarize the working of Snooping TCP. (6)	BTL2	Understanding
6.	Draw and explain the logical model of wireless application environment. (13)	BTL2	Understanding
7.	Examine the wireless transport layer security. (13)	BTL4	Analyzing
8.	Compare the functions of various types of TCPs. (13)	BTL5	Evaluating
9.	List the components of WAP architecture and explain in detail. (13)	BTL4	Analyzing
10.	Discuss about the i) i- mode protocol stack (7) ii) SyncML (6)	BTL6	Creating
11.	Recall about traditional TCP protocol. (13)	BTL1	Remembering
12.	Organize the wireless application protocol architecture. (13)	BTL3	Applying
13.	Identify the service primitives of WDP. (13)	BTL5	Evaluating
14.	Relate the WMLscript complements to WML. (13)	BTL1	Remembering
15.	(i) What is Wireless Telephony application? Explain WTA logical architecture. (7) (ii) Describe the several standard libraries for WML script specified by WAP. (6)	BTL2	Understanding
16.	(i) Discuss the architecture of Wireless Telephony application in detail. (7) (ii) Explain the following: (a) WML (3) and (b)WML scripts. (3)	BTL3	Applying
17.	Recent days Internet sites offer facilities to download music files from video store directly and get the payment billed to our mobile phones. Sketch a Wireless Telephony Application(WTA) architecture that would provide a similar facility for Mobile games. (13)	BTL5	Evaluating
PART - C			
1.	Elaborately discuss about functions of i) Indirect TCP (5) ii) Snooping TCP (5) iii) Mobile TCP (5)	BTL 5	Evaluating
2.	Explain the functions of the wireless transaction protocol. (15)	BTL 5	Evaluating
3.	With neat timing chart explain about wireless session protocol. (15)	BTL 5	Evaluating
4.	Describe the logical diagram of wireless telephone applications. (15)	BTL 6	Creating
5.	Formulate the parameters of transaction and session protocols. (15)	BTL 6	Creating