

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

Academic Year 2024-2025 (Even Semester)

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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 | Remember |
| 2. | List the advantages of mobile computing. | BTL1 | Remember |
| 3. | Distinguish between mobile computing and wireless networking. | BTL4 | Analyze |
| 4. | Name the types of Mobility. | BTL1 | Remember |
| 5. | Compare infrastructure-based network and infrastructure lessnetwork. | BTL2 | Understand |
| 6. | List the challenges in mobile computing. | BTL1 | Remember |
| 7. | Classify the types of wireless networks. | BTL2 | Understand |
| 8. | Illustrate the Ad-Hoc networks with pictorial representation. | BTL3 | Apply |
| 9. | Outline the uses of Ad-Hoc networks. | BTL2 | Understand |
| 10. | List the properties of MAC protocol. | BTL1 | Remember |
| 11. | Point out the objectives of MAC protocols. | BTL2 | Understand |
| 12. | Illustrate the function of presentation, application and data tier of mobile environment. | BTL2 | Understand |
| 13. | What is the role of a MAC protocol? | BTL1 | Remember |
| 14. | Classify the types of MAC Protocol. | BTL2 | Understand |
| 15. | List the random assignment schemes. | BTL1 | Remember |

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|---------------|--|------|------------|
| 16. | Examine the hidden and exposed terminal problems in infrastructure-less network. | BTL4 | Analyze |
| 17. | Infer the primary factor influencing signal strength between near and far terminals in wireless communication. | BTL2 | Understand |
| 18. | “MAC protocol designed for infrastructure based wireless network may not work satisfactory in infrastructure-less environment”-Justify. | BTL5 | Evaluate |
| 19. | Formulate a reason why collision detection based protocol is not suitable for wireless networks. | BTL6 | Create |
| 20. | Assess the working of RTS/CTS in MACA. | BTL5 | Evaluate |
| 21. | Recall the classifications of wireless networks. | BTL1 | Remember |
| 22. | Outline some cellular phone standards. | BTL2 | Understand |
| 23. | Select the TDMA scheme that is suitable for satellite system. | BTL3 | Apply |
| 24. | Identify the problems faced by devices in wireless transmission. | BTL4 | Analyze |
| PART-B | | | |
| 1. | (i) Determine the applications of mobile computing in the real world scenario. (7) (i) Prioritize the characteristics of mobile computing. (6) | BTL5 | Evaluate |
| 2. | (i) Elaborate the generations of mobile communication technologies. (6) (ii) Adapt mobile computing to design Taxi dispatcher and monitoring service. Explain the components in detail. (7) | BTL6 | Create |
| 3. | (i) Defend the hidden and exposed terminal problem in infrastructure-less network. (7) (ii) Assess the architecture of mobile computing. (6) | BTL5 | Evaluate |
| 4. | (i) Compare 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) | BTL5 | Evaluate |
| 5. | Examine the various taxonomy of MAC protocols in detail. (13) | BTL4 | Analyze |
| 6. | (i) Explain the wireless MAC issues in detail. (7) (ii) Determine the working of SDMA and gives its application. (6) | BTL5 | Evaluate |
| 7. | Estimate the performance of various fixed assignment schemes of MAC protocol with appropriate illustration. (13) | BTL5 | Evaluate |
| 8. | Distinguish between SDMA, TDMA, FDMA and CDMA (13) | BTL4 | Analyze |
| 9. | Categorize the types of CSMA. Examine its working principle along with advantages and disadvantages. (13) | BTL4 | Analyze |

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| 10. | (i) Explain the principle responsibilities of the MAC Protocol?(6) (ii) Appraise the functionality of MAC protocol in wireless networks. (7) | BTL5 | Evaluate |
| 11. | Demonstrate the various random assignment schemes that are used in MAC protocol. (13) | BTL3 | Apply |
| 12. | Discover the usgae of multiple accesses with collision avoidance (MACA). (13) | BTL4 | Analyze |
| 13. | Rate the reasons for failure of MAC scheme in wireless networks. (13) | BTL5 | Evaluate |
| 14. | Compose any one scheduled based MAC protocol and explain in detail. (13) | BTL6 | Create |
| 15. | Illustrate in detail about various technologies of mobile computing. (13) | BTL3 | Apply |
| 16. | Explain the operations of MACA with appropriate diagrams. (13) | BTL5 | Evaluate |
| 17. | (i) Review the limitations of mobile computing. (6) (ii) Explain the various multiplexing techniques in detail. (7) | BTL5 | Evaluate |

PART – C

| | | | |
|----|---|-------|----------|
| 1. | Assume that three stations A, B and C are deployed as follows: (i) B is within the transmission range of A and C (ii) A and C are not within the transmission range. Build a method to address this problem. (15) | BTL 6 | Create |
| 2. | (i) Compare 1G with 2G wireless communication technologies.(8) (ii) Summarize the details of 2.5G. How is it different from 2G and 3G technologies? (7) | BTL 5 | Evaluate |
| 3. | Solve the hidden/exposed terminal problem using MACA protocol. (15) | BTL 5 | Evaluate |
| 4. | Estimate the performance of MACA protocol. (15) | BTL 5 | Evaluate |
| 5. | Consider the following scenario: (i) Node A and C wants to transmit data to B at the same time. (ii) Node B transmits data 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. Compile a method that overcomes this problem. (15) | BTL 6 | Create |

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. | What is meant by GSM? | BTL1 | Remember |
| 2. | Define cell. | BTL1 | Remember |
| 3. | List the important features of GSM security. | BTL1 | Remember |
| 4. | Summarize the details of MSC and BSC. | BTL2 | Understand |
| 5. | Experiment with call routing. | BTL3 | Apply |
| 6. | Outline the disadvantages of GSM. | BTL2 | Understand |
| 7. | What is the frequency range of uplink and downlink in GSM network? | BTL1 | Remember |
| 8. | Demonstrate the function of HLR and VLR. | BTL2 | Understand |
| 9. | List the possible handover scenarios of GSM. | BTL1 | Remember |
| 10. | What are the three levels at which security measures are implemented in GSM? | BTL1 | Remember |
| 11. | Analyse the need for EIR. | BTL4 | Analyze |
| 12. | Classify the services of GPRS. | BTL2 | Understand |
| 13. | Illustrate the architecture of GSM authentication. | BTL3 | Apply |
| 14. | What are the information are stored in SIM? | BTL1 | Remember |
| 15. | GPRS is advantageous than GSM. Justify the statement. | BTL5 | Evaluate |
| 16. | Formulate the limitations of GPRS. | BTL6 | Create |
| 17. | What are the main elements of UMTS? | BTL1 | Remember |
| 18. | Categorize the types of Handoff. | BTL4 | Analyze |
| 19. | Can UMTS networks easily work with the existing GSM/GPRS networks? Justify your answer. | BTL5 | Evaluate |
| 20. | Explain the function of GGSN. | BTL2 | Understand |
| 21. | Point out the goals of GPRS. | BTL2 | Understand |
| 22. | Compare soft handoff with hard handoff. | BTL4 | Analyze |
| 23. | Identify the reasons for handover. | BTL3 | Apply |
| 24. | Discover a model to illustrate the effect of handoff. | BTL4 | Analyze |
| PART-B | | | |
| 1. | (i) Elaborate the GSM architecture and its services in detail. (7) (ii) Estimate the GSM Authentication and Security. (6) | BTL6 | Create |
| 2. | Identify the services offered by GSM and explain in detail. (13) | BTL3 | Apply |

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| 3. | Analyze the purpose of radio interface U_m in GSM. (13) | BTL4 | Analyze |
| 4. | Explain the protocol architecture for signaling in GSM. (13) | BTL5 | Evaluate |
| 5. | (i) Write short notes on the following: a. MSISDN (2) b. IMSI (2) c. TMSI (2) d. MSRN (2) (ii) Compile the procedure for MTC and MOC. (5) | BTL6 | Create |
| 6. | Examine in detail, the various types of handover in GSM with necessary diagrams. (13) | BTL4 | Analyze |
| 7. | Elaborate on various frequency allocation methods.(13) | BTL6 | Create |
| 8. | (i) Examine the facts in GSM connection established. Provide a step-by-step explanation of the call setup and termination procedure in GSM. (ii) Categorize the GSM security services and explain. | BTL4 | Analyze |
| 9. | Explain the GPRS architecture reference model with a neat diagram. (13) | BTL5 | Evaluate |
| 10. | Assess the functions of GPRS protocol stack with necessary illustration. (13) | BTL5 | Evaluate |
| 11. | (i) Prioritize the services of GPRS. (7) (ii) Determine the advantages of GPRS over GSM. (6) | BTL5 | Evaluate |
| 12. | Explain in detail, the network architecture of UMTS with a neat diagram. (13) | BTL5 | Evaluate |
| 13. | Decide how the mobile cellular communication has evolved over the generation of technology. (13) | BTL5 | Evaluate |
| 14. | Estimate the functions of HLR and VLR in call routing and roaming. (13) | BTL5 | Evaluate |
| 15. | (i) Explain the message flow between mobile station and BTS during mobile originated call with suitable illustrations. (7) (ii) Explain the bearer services of GSM system. (6) | BTL5 | Evaluate |
| 16. | Interpret the inter cell and intra cell handovers in GSM ? (13) | BTL5 | Evaluate |
| 17. | (i) Explain about MOT and MTO in GSM. (7) (ii) Discuss about the interfaces in UMTS. (6) | BTL5 | Evaluate |
| PART-C | | | |
| 1. | Determine the functions of authentication and encryption in GSM. (15) | BTL 5 | Evaluate |
| 2. | Do mobile phones affect the human body negative? Justify the | BTL 5 | Evaluate |

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| | statement is true or false. (15) | | |
| 3. | Assess the applications of GPRS with its advantages and disadvantages. (15) | BTL 5 | Evaluate |
| 4. | Elaborate the domains and interfaces of Universal Mobile Telecommunication System (UMTS). (15) | BTL 6 | Create |
| 5. | GSM allows a subscriber to move throughout the coverage area with a capability to make or receive calls. Predict the components involved in make or receive calls in roaming. (15) | BTL 6 | Create |

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 | Remember |
| 2. | Why wireless LAN services are of lower quality than wired LAN? | BTL1 | Remember |
| 3. | Why cannot wireless LANs implement CSMA/CD? | BTL2 | Understand |
| 4. | Summarize the design goals of WLANs. | BTL2 | Understand |
| 5. | Imagine the user scenarios for WPANs. | BTL6 | Create |
| 6. | List the various standards in Wireless PANs. | BTL1 | Remember |
| 7. | Inspect the advantages of WLANs. | BTL3 | Apply |
| 8. | List any four Wireless LAN standards. | BTL1 | Remember |
| 9. | List the advantages and disadvantages of Wireless LANs. | BTL1 | Remember |
| 10. | Define Ad hoc wireless network with example. | BTL1 | Remember |
| 11. | Distinguish between infrastructure and ad-hoc networks. | BTL4 | Analyze |
| 12. | Compare wired networks with adhoc wireless networks based on routing. | BTL4 | Analyze |
| 13. | What is the format of frame control field of 802.11 MAC packet structure? | BTL1 | Remember |
| 14. | Evaluate the criteria's under which WPAN is discussed using IEEE 802.11. | BTL5 | Evaluate |
| 15. | List the services provided by IEEE 802.11. | BTL1 | Remember |
| 16. | Discover the elements of Bluetooth core protocols. | BTL4 | Analyze |
| 17. | What is piconet? What restricts the number of active devices in a piconet? | BTL1 | Remember |
| 18. | Compare infra-red with radio transmission. | BTL4 | Analyze |

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| 19. | Compose the advantage of infra-red technology. | BTL6 | Create |
| 20. | Assess the elements in core protocols in Bluetooth. | BTL5 | Evaluate |
| 21. | What are the three low power states of a Bluetooth state? | BTL1 | Remember |
| 22. | List the applications of Wi-Fi. | BTL1 | Remember |
| 23. | Differentiate Wi-Fi from WiMAX. | BTL4 | Analyze |
| 24. | Why is WiMAX forum formed? | BTL1 | Remember |
| PART-B | | | |
| 1. | (i) Explain the system architecture of IEEE 802.11. (7) (ii) Analyze HiperLAN architectural components and their interactions. (6) | BTL4 | Analyze |
| 2. | Explain the IEEE 802.11 MAC management. (13) | BTL1 | Remember |
| 3. | Describe Bluetooth in detail. (13) | BTL1 | Remember |
| 4. | (i) Explain the various IEEE 802.11 standards in detail. (7) (ii) Explain the services offered by IEEE 802.11 standard. (6) | BTL2 | Understand |
| 5. | (i) Explain the features of HiperLAN. (7) (ii) Explain WLL in detail. (6) | BTL2 | Understand |
| 6. | (i) Explain contention free access using polling mechanism in IEEE 802.11. (8) (ii) Explain the protocol stack of Bluetooth. (5) | BTL2 | Understand |
| 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 | Analyze |
| 8. | Explain the working principle of the MAC layer of Bluetooth. (13) | BTL1 | Remember |
| 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 | Analyze |
| 10. | (i) Model the architecture of WiFi in detail. (7) (ii) Describe the architecture of WiMAX in detail. (6) | BTL3 | Apply |
| 11. | Identify the system and protocol structure of 802.16 standard. (13) | BTL3 | Apply |
| 12. | Elaborate on mobile ad-hoc networks. (13) | BTL6 | Create |
| 13. | (i) With a suitable diagram, discuss the extended service set. (7) (ii) Elaborate the advantages and disadvantages of WLAN. (6) | BTL6 | Create |
| 14. | Defend the features and applications of ad-hoc networks. (13) | BTL5 | Evaluate |
| 15. | (i) Design the schematic for the physical layer of IEEE 802.11 infrared and explain. (7) | BTL6 | Create |

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| | (ii) Discuss with suitable diagram distributed coordination function with IEEE802.11 medium access control logic. (6) | | |
| 16. | (i) Infer the advantages and disadvantages of wireless LAN? Under what situation is a wireless LAN desirable over wired LAN. (7) (ii) List the types of Wireless LAN. Also explain mobility in wireless LAN. (6) | BTL4 | Analyze |
| 17. | (i) Write short note on 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) Develop a Bluetooth network from a Bluetooth device. Elaborate the security principles in Bluetooth. (6) | BTL5 | Evaluate |
| PART - C | | | |
| 1. | Estimate the system and protocol architecture of IEEE 802.11 standard. (15) | BTL 6 | Create |
| 2. | Evaluate the two MAC sublayers defined by IEEE 802.11 standard and explain. (15) | BTL 5 | Evaluate |
| 3. | Inspect the functions of MAC & physical layer of IEEE 802.16 in detail. (15) | BTL 4 | Analyze |
| 4. | Assess the various types of HiperLANs. (15) | BTL 5 | Evaluate |
| 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: <ul style="list-style-type: none"> • A small office or a workgroup deployment • An enterprise deployment • A telecommuters deployment Choose the MAC layer mechanisms used to deploy successful WLAN that supports very fast, secure and scalable wireless network for the above scenario. (15) | BTL 6 | Create |
| UNIT IV - MOBILE NETWORK LAYER | | | |
| 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 | Remember |
| 2. | Differentiate cellular from Ad Hoc networks. | BTL4 | Analyze |
| 3. | List the characteristics of MANETs. | BTL1 | Remember |
| 4. | Identify the issues that are addressed by routing protocol in MANET. | BTL3 | Apply |
| 5. | What is Mobile IP? | BTL1 | Remember |
| 6. | List the advantages in DSR. | BTL1 | Remember |
| 7. | Compare AODV with DSR protocols. | BTL4 | Analyze |
| 8. | Name the entities in Mobile IP. | BTL1 | Remember |
| 9. | What is IP-in-IP encapsulation? | BTL1 | Remember |
| 10. | List the applications of MANET. | BTL1 | Remember |
| 11. | Classify the agent discovery in mobile IP. | BTL3 | Apply |
| 12. | Distinguish between minimal encapsulation and IP-in-IP encapsulation. | BTL4 | Analyze |
| 13. | Relate the tunneling with mobile IP. | BTL2 | Understand |
| 14. | Distinguish between proactive and reactive protocols. | BTL4 | Analyze |
| 15. | Summarize about security issues in MANET. | BTL5 | Evaluate |
| 16. | Compare DSDV with DSR. | BTL5 | Evaluate |
| 17. | Outline the concept of RTT. | BTL2 | Understand |
| 18. | Can cellular network and wireless LAN be considered as Ad Hoc networks? Justify. | BTL6 | Create |
| 19. | Construct a VANET. | BTL6 | Create |
| 20. | Analyze the types of attacks on adhoc networks. | BTL4 | Analyze |
| 21. | What is the need for mobile IP? | BTL1 | Remember |
| 22. | Differentiate the functionalities of a foreign agent from home agent. | BTL4 | Analyze |
| 23. | Examine the purpose of agent solicitation message. | BTL3 | Apply |
| 24. | What should be the value of TTL field in the IP packet of agent advertisement? Why? | BTL1 | Remember |
| PART-B | | | |
| 1. | (i) Determine the characteristics and applications of MANET. (7) (ii) Explain DSR Routing Protocols in detail. (6) | BTL5 | Evaluate |

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| 2. | (i) Examine the DHCP client initialization procedure. (6) (ii) Distinguish between reactive and proactive routing protocols. (7) | BTL4 | Analyze |
| 3. | Explain in detail, the traditional routing protocols. (13) | BTL5 | Evaluate |
| 4. | Elaborate on multicast routing protocols with necessary illustration. (13) | BTL6 | Create |
| 5. | (i) Briefly discuss about agent discovery in Mobile IP. (7) (ii) Compile the registration procedure in Mobile IP. (6) | BTL6 | Create |
| 6. | (i) Analyze DSDV routing in detail. (7) (ii) Discover the advantages and Disadvantages of DSDV. (6) | BTL4 | Analyze |
| 7. | Discuss route discovery and route maintenance mechanisms in DSR with illustrations. List its merits and demerits. (13) | BTL6 | Create |
| 8. | Explain the design issues in MANET and the applications of adhoc network. (13) | BTL5 | Evaluate |
| 9. | (i) Illustrate the classification of unicast MANET Routing Protocols. (7) (ii) Identify how multicast routing is carried out in ad-hoc networks. (6) | BTL3 | Apply |
| 10. | (i) List 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, select at least one type of security attack that exploits vulnerability at that layer.(7) | BTL3 | Apply |
| 11. | With a diagram explain about DHCP and its protocol architecture. (13) | BTL5 | Evaluate |
| 12. | Discuss the architecture of VANET with a neat diagram. (13) | BTL6 | Create |
| 13. | Assess the performance of any two VANET routing protocol with an example. (13) | BTL5 | Evaluate |
| 14. | (i) Compare and contrast MANET vs VANET. (7) (ii) Estimate the security attacks on VANET. (6) | BTL5 | Evaluate |
| 15. | With a neat diagram, defend how packet delivery to and from a mobile node is transferred through mobile IP. (13) | BTL5 | Evaluate |
| 16. | (i) Explain the client server configuration of DHCP. (7) (ii) Prioritize the main functions of DHCP. (6) | BTL5 | Evaluate |
| 17. | Evaluate the performance of DSR routing over DSDV. (13) | BTL4 | Analyze |
| PART - C | | | |
| 1. | Consider the network given below. Here 'S' is source node and 'D' is target node. Build the process of route discovery, route | BTL 6 | Create |

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| | reply,data delivery and route caching using DSR. (15) | | |
| | | | |
| 2. | Determine the three approaches to support the IP micro-mobility. (15) | BTL 5 | Evaluate |
| 3. | Write short notes on the following: (i) Ad Hoc On-demand Distance Vector(AODV) (8) (ii) Zone Routing Protocol. (7) | BTL 6 | Create |
| 4. | A major task of the designer of a wireless sensor network is prolonging the life of the network. Justify and Explain how this is achievedwhile designing a MANET.(15) | BTL 6 | Create |
| 5. | Explain with a neat diagram how a packet is delivered from a mobile node to another mobile node without losing its information during mobility of the nodes. (15) | BTL 5 | Evaluate |

**UNIT V - MOBILE TRANSPORT AND APPLICATION
LAYER**

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

PART - A

| Q. No. | Questions | BT Level | Competence |
|--------|---|----------|------------|
| 1. | Infer the basic features of WML. | BTL2 | Understand |
| 2. | Define Mobile TCP. | BTL1 | Remember |
| 3. | List the advantages of M-TCP. | BTL1 | Remember |
| 4. | What is WTLS? | BTL1 | Remember |
| 5. | Name the classes of wireless transaction protocol. | BTL1 | Remember |
| 6. | List the features of WSP. | BTL1 | Remember |
| 7. | Determine the components of WAP. | BTL5 | Evaluate |
| 8. | Decide the applications of M-TCP. | BTL5 | Evaluate |
| 9. | Identify standard libraries for WML script. | BTL3 | Apply |
| 10. | Write a note on session management. | BTL6 | Create |
| 11. | What is indirect TCP? | BTL1 | Remember |
| 12. | Analyze the mechanism of the transmission control protocol. | BTL4 | Analyze |

| | | | |
|---------------|---|------|------------|
| 13. | Evaluate the service request structure of WTP class 0. | BTL5 | Evaluate |
| 14. | Compose the basic objective of WAP. | BTL6 | Create |
| 15. | Compose the time sequence chart for WSP /B session termination. | BTL6 | Create |
| 16. | Define wireless application environment. | BTL1 | Remember |
| 17. | Where i-mode is used? | BTL1 | Remember |
| 18. | what is SyncML? | BTL1 | Remember |
| 19. | Examine the advantages of Snooping TCP. | BTL4 | Analyze |
| 20. | Assess the transaction oriented TCP connection setup. | BTL5 | Evaluate |
| 21. | Recall how does mobile TCP maintain end to end semantics? | BTL1 | Remember |
| 22. | Summarize the parameters of TR_Invoke.req primitive. | BTL2 | Understand |
| 23. | Determine how can we extend basic WAE to WTA? | BTL5 | Evaluate |
| 24. | Infer the capabilities of WML script. | BTL4 | Analyze |
| PART-B | | | |
| 1. | Explain the wireless markup language with its features. (13) | BTL5 | Evaluate |
| 2. | Examine the classical TCP improvements in detail. (13) | BTL4 | Analyze |
| 3. | Estimate the functionality of WSP/B over WTP. (13) | BTL5 | Evaluate |
| 4. | Elaborate on push architecture with a neat diagram. (13) | BTL4 | Analyze |
| 5. | (i) Appraise the WTP class 2 protocols. (7) (ii) Assess the working of Snooping TCP. (6) | BTL5 | Evaluate |
| 6. | Explain the logical model of wireless application environment in detail. (13) | BTL5 | Evaluate |
| 7. | Examine the details of wireless transport layer security. (13) | BTL4 | Analyze |
| 8. | Estimate the functionalities of various types of TCPs. (13) | BTL5 | Evaluate |
| 9. | Determine the components of WAP architecture and explain in detail.(13) | BTL6 | Create |
| 10. | Write short note on the following: i) i- mode protocol stack (7) ii) SyncML (6) | BTL6 | Create |
| 11. | Examine the details of traditional TCP protocol. (13) | BTL4 | Analyze |
| 12. | Illustrate the wireless application protocol architecture. (13) | BTL3 | Apply |
| 13. | Identify the service primitives of WDP. (13) | BTL3 | Apply |
| 14. | Determine how the WMLscript complements to WML. (13) | BTL6 | Create |
| 15. | (i) Elaborate on Wireless Telephony application (WTA) logical | BTL6 | Create |

| | | | |
|-----------------|--|-------|----------|
| | architecture. (7) (ii) Discuss the several standard libraries for WML script specified by WAP. (6) | | |
| 16. | (i) Discuss the architecture of Wireless Telephony application in detail. (7) (ii) Explain the following: (a) WML (3) and (b)WML scripts. (3) | BTL6 | Create |
| 17. | Recent days Internet sites offer facilities to download music files from video store directly and get the payment billed to our mobile phones. ompile a Wireless Telephony Application (WTA) architecture that would provide a similar facility for Mobile games. (13) | BTL6 | Create |
| PART - C | | | |
| 1. | Write short notes on the following: i) Indirect TCP (5) ii) Snooping TCP (5) iii) Mobile TCP (5) | BTL 6 | Create |
| 2. | Explain the functions of the wireless transaction protocol. (15) | BTL 5 | Evaluate |
| 3. | With neat timing chart explain about wireless session protocol. (15) | BTL 5 | Evaluate |
| 4. | Discuss the logical diagram of wireless telephone applications. (15) | BTL 6 | Create |
| 5. | Formulate the parameters of transaction and session protocols. (15) | BTL 6 | Create |