



**ST. ANNE'S**  
**COLLEGE OF ENGINEERING AND TECHNOLOGY**  
ANGUCHETTYPALAYAM, PANRUTI – 607106.

**QUESTION BANK**

**DECEMBER 2017 - JUNE 2018 / EVEN SEMESTER**

**BRANCH: CSE**

**YR/SEM: I II/VI**

**BATCH: 2015 - 2019**

**SUB CODE/NAME: IT6601 – MOBILE COMPUTING**

**UNIT I**

**INTRODUCTION**

**PART - A**

1. What Is Mobile Computing?
2. What is main advantage and Disadvantage of mobile computing?(May/june 2015)
3. Distinguish Mobile Computing vs. Wireless Networking. (Nov/Dec-2017) (Apr / May-2017)
4. List out various forms of Wireless networks?
5. Brief about Access point ?
6. Write Advantages of Wireless LANs over Wired LANs?
7. Write Bluetooth technology?
8. Define PANs?
9. Describe Mobile ad hoc network?
10. List out the Characteristic of Mobile computing?
11. Write about MAC protocol?
12. List out classification of MAC protocol?
13. Explain hidden and exposed terminal problems in infrastructure-less network. (May/June 2015)
14. What are the limitations of Mobile Computing? (Nov/Dec 2016)
15. What are the different Random Assignment Scheme in MAC? (Nov/Dec 2016)
16. List out various forms of Wireless networks?
17. Define LANs?
18. Write Advantages of Wireless LANs over Wired LANs?
19. What is piconet?
20. Difference between FA and HA. (Nov/Dec-2017)
21. List some random assignment scheme. (Apr / May-2017)

**PART - B**

1. What Is Mobile Computing?(4 marks)
  2. Compare Mobile Computing vs. Wireless Networking.(7)
  3. Explain in detail of Mobile Computing Applications? ( 6 marks) (Nov/Dec 2016)  
(Apr / May-2017)
  4. Detail about Characteristics of Mobile Computing?(7) (May/June 2015)
  5. Explain in detail of Structure of Mobile Computing Application? (7) (May/June 2015)
- MAC PROTOCOLS**
6. Explain in detail about MAC Protocols and its properties? (7) (Apr / May-2017)
  7. Write in detail of Wireless MAC Protocols: Some Issues .(13) (Apr / May-2017)
  8. Explain about A Taxonomy of MAC Protocols ? (13) (May/June 2015) (Nov/Dec 2016) (Apr / May-2017)

## **PART - C**

(If Applicable, Either or Choice)

For Case Study/Comprehensive type Questions, there will be no choice.

### **UNIT II**

#### **MOBILE INTERNET PROTOCOL AND TRANSPORT LAYER**

##### **PART - A**

1. Define Tunnelling with its functions?
2. Define Care-Of-Address (COA) with its types? (Nov/Dec 2016)
3. Define Agent Discovery and its discovery methods?
4. Describe some of the features of Mobile IP
5. Define DHCP? (May/June 2016)
6. What Are The Common TCP/IP Application Protocols?
7. What is TCP?
8. What is IP?
9. What is IPv6?
10. What is RARP? (Nov/Dec-2017)
11. What are the difference between TCP and UDP?
12. Differentiate between TCP/IP and OSI Model?
13. Name any 4 Example of Application layer?
14. What are the various types of flow control used in congestion avoidance?
15. Draw the Architecture of OSI Reference Model?
16. Illustrate the use of BOOTP protocol? (Nov/Dec 2015)
17. What is encapsulation in Mobile IP? (May/June 2016)
18. State some of the classical solutions to improve the efficiency of TCP in wireless?
19. What is Fast retransmit?
20. What is mean by Slow Start?
21. Define DNS. (Nov/Dec-2017)
22. What is route optimization? (Apr / May-2017)

##### **PART – B**

1. What is mobile IP? Explain various entities and terminologies used in Mobile Systems. (Or) Explain the services of Mobile IP and describe the tunneling process?(13) (Apr / May-2017)
2. Answer the following with respect to missing and duplicate segments in TCP operation.(13)
  - (a) What can cause segments to be missed at the receiver-end and also cause duplicate segments to arise? Explain your answer using a suitable scenario of operation.
  - (b) How exactly is a missing segment detected in TCP? Explain the specific actions that take place when a missing segment is detected.
3. Explain about the key mechanism in Mobile IP?(7) (Nov/Dec 2016)
4. Discuss how optimization in achieved in mobile IP?(6)
5. With a diagram explain DHCP and its protocol architecture?(13) (May/June 2016)

6. Explain the following terms associated with TCP/IP stack: (a) IP, (b) HTTP, (c) SMTP, (d) MIME, (e) FTP, (f) SNMP, (g) ICMP, (h) ARP, (i) RARP, (j) DNS, (k) IP Addresses, (l) IGMP (13)
7. With a neat diagram explain the architecture of TCP/IP?(13) (May/June 2016)
8. How data are transmitted from client to server? Explain the operation of TCP with its header format?(10)
9. What are the main differences between TCP/IP versus ISO/OSI Model?(6)
10. Give the comparison of various TCP advantages and disadvantages in wireless networking.(6)(Nov/Dec 2016)
11. Explain the various improvements in TCP performance with diagram (7) (May/June 2016)
12. State some of the classical solutions to improve the efficiency of TCP in wireless?(6)
13. Explain IP-in-IP, Minimal IP and GRE encapsulation methods.(May/June 2016)(13) (Apr / May-2017)

### **PART - C**

(If Applicable, Either or Choice)

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### **UNIT – III**

#### **MOBILE TELECOMMUNICATION SYSTEM**

### **PART - A**

1. Write about GSM?
2. List out GSM radio frequencies?
3. List out GSM services? (Apr / May-2017)
4. What are all the radio frequency elements compressed by RSS?
5. Write short notes about SIM card?
6. Define Base Station Subsystem ?
7. Define Base Transceiver Station ?
8. Define Base Station Controller ?
9. Define Mobile Switching Center?
10. Define Home Location Registers ?
11. Define Visitor Location Register ?
12. Define Operation subsystem (OSS)?
13. Define General Packet Radio Service (GPRS).
14. Define GGSN?
15. Define User Equipment?
16. Define Radio Network Subsystem?
17. List the 3 important features of GSM security. (May/June 2015)
18. What are the main elements of UMTS. (May/June 2015)
19. Difference between 1g,2g,3g,4g,5g?
20. Write about the supplementary services in GSM? (Nov/Dec 2016)
21. List the service of GPRS. (Nov/Dec-2017)
22. Define handoff and its types. (Nov/Dec-2017)
23. Write the suggestion of mobile phone with respect to human body. (Apr / May-2017)

## **PART – B**

1. Explain detail about GSM architecture with neat diagram?\_(May/June 2015) Nov/Dec 2016) (Apr / May-2017) (14)
2. Describe about the GSM service in details .(13)
3. Explain in detail about General Packet Radio Service (GPRS) with architecture? (May/June 2015) (Apr / May-2017) .(13)
4. Explain in detail about Universal Mobile Telecommunications System (UMTS) and its dissimilarity?\_(May/June 2015) Nov/Dec 2016) .(13)
5. Explain in detail of 1G,2G,2.5G,3G,4G and 5G ? (Nov/Dec 2016) (13)

## **PART - C**

(If Applicable, Either or Choice)

For Case Study/Comprehensive type Questions, there will be no choice.

## **UNIT-4**

### **MOBILE AD-HOC NETWORKS**

#### **PART-A**

1. What is Adhoc Network?
2. What is Mobile Adhoc Network?
3. List the characteristics of MANETs?(May/June 2016)
4. What are the applications of MANET? (Apr / May-2017)
5. What are the three important ways in which a MANET routing protocol differs from routing of packets in a traditional network?
6. What are the types of communications?
7. What are the types of popular MANET routing protocols?
8. What is tree based protocol?
9. What is mesh based protocol?
10. Define VANET.
11. What are the design issues in MANET?
12. What are the characteristics of secure Adhoc Network?
13. What are the two phases of DSR?
14. What is the use of VANET?
15. What is network topology?
16. What are the classification of Unicast MANET Routing Protocols?
17. What is proactive protocol? (Apr / May-2017)
18. What is reactive protocol? (Apr / May-2017)

19. What is a hybrid protocol?
20. Compare and contrast MANET Vs VANET. (May/June 2015) (Nov/Dec 2016)
21. What is multicasting? (Nov/Dec 2016)
22. Compare AODV and DSR. (Nov/Dec 2017)
23. What are the contents of link state advertisement messages. (Nov/Dec 2017)

### **PART-B**

1. Explain in detail the basic concepts of Adhoc network.(13)
2. Explain Characteristics, Applications of MANET? (7)(May/June 2016)
3. Explain in detail about MANET Design Issues.(7) (Apr / May-2017)
4. Explain the Traditional Routing protocol. (13) (Nov/Dec 2016)
5. What are reactive and proactive protocols? Specify its advantages and disadvantages. (7)
6. Explain in detail about popular MANET routing protocols. (13)
7. Explain DSR Routing Protocols in detail? (7) (May/June 2016)
8. What are Multicast Routing protocols. (7)(Nov/Dec 2016)
9. Draw and explain the architecture of VANET? (7) (May/June 2016)
10. Explain the various Security and attacks on VANET. (7)(May/June 2016)

### **PART - C**

(If Applicable, Either or Choice)

For Case Study/Comprehensive type Questions, there will be no choice.

### **UNIT-V**

#### **MOBILE PLATFORMS AND APPLICATIONS**

#### **PART-A**

1. What is Android and its advantages?
2. What Is the Google Android SDK?
3. What is the Android Architecture?
4. Describe the Android Framework.
5. What is the use of an activity Creator?
6. What are Intents?
7. Differentiate Activities from Services.
8. Define POS. (Nov/Dec 2016)
9. What is the importance of Android in the mobile market?
10. What is ADB?
11. What are the four essential states of an activity?
12. Differentiate E-Commerce and M-Commerce.(Nov/Dec 2016)
13. What role does Dalvik play in Android development?
14. What is Radio Frequency Identification?
15. What is portable wifi hotspot?

16. What is the difference between a regular bitmap and a nine-patch image?
17. What language is supported by Android for application development?
18. Features of Android OS?
19. Tools Required for Developing Android Apps?
20. What is AVD?
21. Give four examples of Mobile OS? (May/June 2015)
22. What are the constraints in mobile OS. (Nov/Dec 2017) (Apr / May-2017)
23. Pros and cons of blackberry OS. (Nov/Dec 2017)
24. Pros and cons of M-Commerce. (Apr / May-2017)

### **PART-B**

1. Explain various Operating System for Mobile Devices.(13) (Apr / May-2017)
2. Explain the components of Mobile Operating System? (8) (May/June 2016)
3. Explain the commercial operating systems for mobile phones and mention the important characteristics of each one.(7)
4. Compare and contrast the various Mobile OS? (6)(10)(Nov/Dec 2016)
5. Briefly explain how an operating system for a sensor network is different from a traditional operating system.(13)
6. Write short notes on Android SDK . (8)(May/June 2016)
7. Explain about M-Commerce. (Apr / May-2017)(13)
8. What do you mean by the 4 Ps of commerce? Explain the different forms of commerce that are obtained by varying the interpretation of the Ps.(7)
9. Explain the various applications of M-commerce? (6) (May/June 2016) (Nov/Dec 2016)
10. Explain the functionalities of the various layers of the architecture of a mobile commerce framework.(13)
11. Explain the Mobile Payment Schemes and Security Issues?(7) (May/June 2016) (Nov/Dec 2016)
12. What is RFID? Explain few application in which RFID is useful.(3) (Nov/Dec 2016)

### **PART - C**

(If Applicable, Either or Choice)

For Case Study/Comprehensive type Questions, there will be no choice.

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