FACULTY OF ENGINEERING
B.E. (CSE) VIII-Semester (CBCS) (Main) Examination, September 2020

Time: 2 hours

Subject : Mobile Computing (Elective-III)

Max. Marks: 70

PART – A

Note: Answer any five questions.

(5x2 = 10 Marks)

1. Define mobile computing. Give suitable example for mobile computing.
2. Write the benefits of spread spectrum.
3. What is uplink and downlink frequency band is GSM
4. How can efficient routing be done in satellite systems?
5. Differentiate piconet and scatternet.
6. List the features of extended service set.
7. Compare MANETS vs VANETS.
8. What is tunneling and encapsulation?
9. How does WAP 2.0 overcome problems of WAP 1.0
10. Why do you need special file systems for mobile networks?

PART – B

Note: Answer any four questions.

(4x15 = 60 Marks)

11. a) Describe the 3-cell and 7-cell clustering used in cellular systems.
    b) What is path loss of radio signal? Explain signal propagation effects.

12. a) How does the handover decision takes place in GSM depending on receivers signal strength? Explain.
    b) Compare DAB and DVB

13. a) Explain the protocol stack of BLUETOOTH with diagram.
    b) Draw and explain MAC frame format of IEEE 802.00 wireless LAN.

14. a) Differentiate DSDV routing with AODV protocol.
    b) Why DHCP is used? Explain in detail.

15. a) What are the types of mobile transaction models? Explain any one.5
    b) Contrast and compare Indirect TCP, snooping TCP AND Mobile TCP.

16. List out the different file systems along with elaboration.

17. Write short notes on
    a) DSSS
    b) Modulation techniques

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FACULTY OF ENGINEERING
BE 4/4 (CSE) I Semester (Backlog) Examination, December 2019

Subject: Mobile Computing (Elective – I)

Time: 3 Hours   **Max. Marks: 75**

Note: Answer all questions from Part – A, & any five questions from Part – B.
PART – A (25 marks)

1) Explain user mobility and device mobility?   [3]

2) Write a short note on spread spectrum?   [2]

3) Write about different Broadcast models?   [3]

4) What is the reason for the failure of CSMA/CD in wireless networks?   [3]

5) Write any two advantages and disadvantages of WLAN?   [2]

6) Explain the concept of reverse tunnelling?   [3]

7) Explain about Infrared vs radio transmission?   [3]

8) Why standard TCP is not suitable for wireless networks?   [2]

9) Write the advantages and disadvantages of Indirect-TCP?   [2]

10) Give an example for WML script?   [2]

PART – B (5 x10=50 Marks)

11. a) Compare SDMA, FDMA, TDMA and CDMA?   [5]
    b) Explain about signal propagation. Why do radio waves do not follow straight
       line? Why is reflection both useful & harmful?   [5]

12. a) Explain about GPRS system in detail?   [4]
    b) With the help of a diagram, explain system architecture of GSM ?   [6]

13. a) Describe the steps in configuring IP addresses in DHCP?   [5]
    b) Explain about Localization and calling?   [5]

14. a) Explain different types of orbits briefly?   [5]
    b) Explain handover scenarios in GSM?   [5]

15. a) Explain about architecture of Hyperlan1 briefly?   [5]
    b) Describe briefly the layers in Bluetooth protocol with a neat sketch?   [5]

16. a) Explain snooping TCP. What are its advantages and disadvantages?   [5]
    b) Explain the concept of fast transmit/fast recovery in traditional TCP?   [5]

17. Explain the Features of Operating Systems for mobile devices briefly?   [10]

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Code No. 305

FACULTY OF ENGINEERING

B.E. 4/4 (CSE) I – Semester (Main & Backlog) Examination, December 2017

Subject: Mobile Computing (Elective – I)

Time: 3 Hours   Max.Marks: 75

Note: 1. Answer all questions from Part A & any five questions from Part B.
2. Missing data, if any, may be suitably assumed.

PART – A (25 Marks)

1	List the classification of Antenna along with its usage.	3
2	Write the applications of medium access control protocol.	2
3	What is localization? Give an example.	3
4	Give the different types of handover in GSM.	2
5	Compare the features of Infra red and radio transmission.	3
6	Write the classification of Routing protocols.	2
7	What is DHCP? Write its application.	3
8	Write about Palm OS.	2
9	Differentiate between WAP1.X and WAP 2.X.	3
10	What is MANET?	2

PART – B (50 Marks)

11 a)	Compare SDMA / TDMA / FXMA / CDMA.	5
b)	Define spread spectrum and differentiate between DHSS and FHSS.	5
12	Discuss with the help of a diagram the system architecture of GSM.	10
13	Discuss the protocol stack of blue tooth with the help of a diagram.	10
14 a)	Write about any three classical TCP improvements.	5
b)	Discuss any two topology based routing protocols in MANETS.	5
15	What is WWW? Discuss the architecture of Wireless Application protocol.	10
16 a)	Write in detail about any four modulation techniques.	6
b)	Write about Digital Audio Broadcasting.	4
17	Write short notes on the following:	
a)	MAC Physical layer	3
b)	HYPERLAN	4
c)	Mobile Transport Layer	3

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Code No. 3277 / S

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B.E. 4/4 (CSE) I - Semester (Suppl.) Examination, May / June 2017

Subject : Mobile Computing (Elective – I)

Time : 3 Hours

Max. Marks: 75

Note: Answer all questions from Part-A and answer any five questions from Part-B.

PART – A (25 Marks)

1	Write about a Cellular Network.	(2)
2	Draw MSK for the bit stream 1 0 1 0 0 1 0.	(3)
3	Write the basics of Satellite systems.	(3)
4	What is Localization?	(2)
5	Differentiate Adhoc and Infrastructure Networks.	(2)
6	Explain the functionalities of Link Manager of Bluetooth.	(3)
7	What is DHCP? State its functionality.	(2)
8	List various applications of Mobile Adhoc Networks.	(3)
9	Differentiate WAP 1.x and 2.x.	(3)
10	Enlist the features of Symbian Operating system.	(2)

PART – B (50 Marks)

11 (a) What is Multiplexing? Discuss different types of Multiplexing. (5)
   (b) What is Spread spectrum? Write about the techniques used to spread a
     spectrum. (5)

12 Describe the functional Architecture of GSM system, with the help of a diagram. (10)

13 Explain Bluetooth security block diagram. (10)

14 Discuss Tunneling and Encapsulation mechanisms of Mobile IP. (10)

15 Discuss in detail Protocol Architecture for WAP. (10)

16 (a) Explain briefly about TETRA frame structure. (5)
   (b) Compare and contrast Traditional TCP and classical TCP. (5)

17 Write short notes on the following: (10)
   (a) HIPERLAN
   (b) DVB
   (c) Piles Systems

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FACULTY OF ENGINEERING

B.E. 4/4 (CSE) I-Semester (Main) Examination, December 2016

Subject : Mobile Computing (Elective – I)

Time : 3 hours   Max. Marks : 75

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1	Classify Multiple Access Types.	2
2	Differentiate direct sequence and frequency Hop Spread spectrum.	3
3	Write about different types of Handovers scenarios in GSM.	3
4	Explain WWW.	2
5	Differentiate Infrared and Radio transmission.	3
6	List features of Bluetooth.	2
7	Differentiate Wired and Wireless transmission.	2
8	List the characteristics used to deploy application over 2.5/3G wireless links.	3
9	Write about WAP protocol stack.	2
10	Write about MIO-NFS.	3

PART – B (50 Marks)

11 a)	What is Modulation? Discuss different types of Modulation.	5
b)	Compare CDMA, TDMA, and FDMA.	5
12 a)	Describe the Protocol Architecture of GSM for signaling.	6
b)	Write in detail DECT system architecture reference model.	4
13	Discuss in detail Bluetooth protocol stack, with a diagram.	10
14 a)	Write about any two classical TCP improvements.	6
b)	Write short notes on DHCP.	4
15	Explain about symbian operating system and Java Card support for mobility.	10
16 a)	Write the different phases of HIPERLAN.	5
b)	What is Adhoc Network? List its Advantages and Disadvantages.	5
17	Write short notes on : a) WATM b) DAB c) Performance enhancing proxies	10

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FACULTY OF ENGINEERING

B.E. 4/4 (CSE) I – Semester (Suppl.) Examination, June 2016

Subject: Mobile Computing (Elective – I)

Time: 3 Hours   Max.Marks: 75

Note: Answer all questions from Part A. Answer any five questions from Part B.

PART – A (25 Marks)

1 What is Multi-path propagation?   2
2 Write disadvantages of cellular systems.   3
3 Write the functions of (i) Mobile station (ii) Base station (iii) Mobile Switching Centre in GSM.   3
4 What is the difference between inclination angle and elevation angle in Satellite system?
5 Write the advantages and disadvantages of infrared transmission.   2
6 List the differences between infrastructure and adhoc networks.   3
7 Explain tunneling and encapsulation in Mobile IP.   2
8 Define Transaction-oriented TCP.   3
9 Write about WML.   3
10 What are the goals of WTLS layer?   2

PART – B (50 Marks)

11 a) What is spread spectrum? Explain about Direct sequence spread spectrum and Frequency Hopping spread spectrum.   5
   b) Compare CDMA, FDMA, TDMA and SDMA.   5

12 a) What is DECT? Explain its system architecture.   5
   b) Explain the types of handover in satellite system.   5

13 What is Bluetooth? Explain its protocol stack. How security is ensured in Bluetooth?   10

14 a) Explain the role of DHCP.   4
   b) Write the advantages and disadvantages of Snooping TCP.   6

15 a) What is WAP? Briefly explain its architecture.   5
   b) List out the features of palm OS.   5

16 a) Compare Frequency division multiplexing and Time division multiplexing.   5
   b) What is Digital Audio Broadcasting? Explain.   5

17 Write short notes on the following:
   a) Java Card Support for mobility   3
   b) COA   3
   c) Hiper LAN.   4

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FACULTY OF ENGINEERING

B.E. 4/4 (CSE) I - Semester (Main) Examination, December 2015

Subject : Mobile Computing (Elective – I)

Time : 3 hours

Max. Marks : 75

Note: *Answer all questions from Part-A. Answer any FIVE questions from Part-B.*

PART – A (25 Marks)

1 Explain MSK.   2
2 What is Signal propagation?   3
3 Draw the MOT object structure and explain.   3
4 What are the function of GGSN and SGSN in GPRS?   2
5 List some of the advantages of Wireless LAN.   3
6 What do you understand by piconet and scatternet in Bluetooth?   2
7 What are performance enhancing proxies?   3
8 What is COA? Write difference between foreign agent COA and Co-located COA.   2
9 Write about WML script.   3
10 What is the goals of WLS layer?   2

PART – B (50 Marks)

11 a) What is multiplexing? Compare time division multiplexing and code division multiplexing.
   b) Explain the term hidden and exposed terminals, near and far terminals in medium access control.

12 a) Sketch GSM architecture and explain briefly.
   b) What do you mean by digital video broadcasting? Explain

13 What is Hiper LAN? Explain architecture of infrastructure based Hiper LAN2. Also explain its protocol stacks.

14 a) What is Mobile Adhoc Network? Explain the difference between wired network and Adhoc wireless network.
   b) Write the advantages and disadvantages of Mobile TCP.

15 a) What is WAP? Briefly explain its architecture.
   b) List out the features of Symbian OS.

16 a) Write down the advantages of Cellular systems.
   b) Explain about GEO, LEO and MEO in satellite system.

17 Write short notes on the following :
   a) Infrared transmission
   b) DHCP
   c) Java Card support for mobility

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FACULTY OF ENGINEERING

B.E. 4/4 (CSE) I – Semester (Suppl.) Examination, June / July 2015

Subject: Mobile Computing (Elective – I)

Time: 3 Hours   Max.Marks: 75

Note: Answer all questions from Part A. Answer any five questions from Part B.

PART – A (25 Marks)

1 Explain Gaussian minimum shift keying.
2 Define multiplexing.
3 Give the frame hierarchy of GSM.
4 Write the disadvantages of GSM.
5 Differentiate infrared and radio transmission.
6 Define Pico Net and Scatter net.
7 What is reverse tunneling?
8 Explain traditional TCP.
9 Give the layered architecture of mobile device.
10 Give the features of windows CE.

PART – B (50 Marks)

11 a) Explain about CDMA.
   b) Differentiate between DHSS and FHSS.

12 a) Write about digital video broadcasting.
   b) Discuss about GSM security.

13 a) Give Hyperlan architecture.
   b) Explain security concept in Bluetooth.

14 a) Explain IP-in-IP encapsulation of mobile IP.
   b) Write about M-TCP.

15 a) Explain Java card support for mobility.
   b) Explain wireless application protocol.

16 a) Give GSM layered architecture.
   b) Explain MANETs.

17 Write short notes:
   a) Digital Audio broadcasting
   b) Modulation
   c) Broadcast system

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