Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
SIXTH SEMESTER B.TECH DEGREE EXAMINATION(R&S), MAY 2019

Course Code: CS364
Course Name: MOBILE COMPUTING

Max. Marks: 100   Duration: 3 Hours

PART A
Answer all questions, each carries 3 marks.   Marks

1	How does middleware and gateway functions in mobile computing application?	(3)
2	Why does the multiple access technologies are important in wireless communication system?	(3)
3	What is an ISM band? Why it is called free band?	(3)
4	Write functional differences between 2nd and 3rd generation networks?	(3)

PART B
Answer any two full questions, each carries 9 marks.

5	a)	Discuss different types of mobility in mobile computing functions?	(5)
	b)	Compare nomadic mobile computing and pervasive mobile computing.	(4)
6	a)	How does spread spectrum techniques eliminates narrow band interference during signal transmission?	(5)
	b)	Write and explain any one method to improve coverage and capacity of cellular network?	(4)
7		Explain the architectural components and services of GSM technology with suitable diagrams.	(9)

PART C
Answer all questions, each carries 3 marks.

8	Write down the features of 802.11a, 802.11b, 802.11n WLAN standards	(3)
9	Distinguish between Adhoc network and Infrastructure network	(3)
10	Explain different requirements of Mobile IP.	(3)
11	Describe different types of handoff strategies in mobile communication networks.	(3)

PART D
Answer any two full questions, each carries 9 marks.

12	a)	Explain the architecture of IEEE 802.11 standard with suitable diagram.	(5)
	b)	Draw and explain MAC frame format of IEEE 802.11	(4)
13	a)	Explain the working procedure of Dynamic Source Routing(DSR) Protocol with suitable example.	(5)
	b)	Write down the role of DHCP in mobile network.	(4)

| 14 | How does Wireless Application Protocol(WAP)provide mobility support in mobile applications? Explain with suitable diagram. | (9) |

PART E

Answer any four full questions, each carries10 marks.

15	Compare the following mobile transport layer protocols (i) Indirect TCP (ii) Snooping TCP (iii) Mobile TCP	(10)
16	Explain the working procedure and protocol stack architecture of Bluetooth technology with suitable diagrams.	(10)
17	Explain the following mobile application languages (i)XML (ii) J2ME (iii) JavaCard	(10)
18	Explain network architecture and interfaces of next generation network-LTE	(10)
19	Discuss about various security issues in mobile computing	(10)
20	Design an adhoc network for forest fire detection scenario. (i) Write the requirements of proposed network (ii) Propose suitable routing protocol and justify reason for selection (iii) Propose method for early prediction of forest fire.	(10)

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