

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
Sixth semester B.Tech degree examinations (S), September 2020

Course Code: CS364

Course Name: MOBILE COMPUTING

Max. Marks: 100

Duration: 3 Hours

PART A

Answer all questions, each carries 3 marks.

Marks

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|---|--|-----|
| 1 | Differentiate between Telecommunication networks and Internet? | (3) |
| 2 | List the functions of following middleware?
a) Message Oriented Middleware b) Transaction Processing Middleware | (3) |
| 3 | Write the functions of Home Location Register (HLR) and Visitors Location Register (VLR) in GSM? | (3) |
| 4 | Why spread spectrum is used in wireless communication? List the benefits? | (3) |

PART B

Answer any two full questions, each carries 9 marks.

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| 5 | a) Differentiate between TDMA, SDMA and FDMA? | (5) |
| | b) What are the functions of Transcoding Middleware? Give two examples? | (4) |
| 6 | a) Explain the various applications of mobile computing. | (5) |
| | b) List out and explain the design issues for mobile computing. | (4) |
| 7 | Explain the working of GSM with the help of a neat diagram. | (9) |

PART C

Answer all questions, each carries 3 marks.

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| 8 | Classify the routing algorithms used in Mobile Ad hoc Network (MANET). | (3) |
| 9 | Write the limitations of conventional TCP (for wired network) to be used in mobile networks? | (3) |
| 10 | Write three benefits of WAP (Wireless Access Protocol)? | (3) |
| 11 | List out the steps involved in DHCP for assigning an IP address to a newly connected host machine. | (3) |

PART D

Answer any two full questions, each carries 9 marks.

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| 12 | Describe the working of Dynamic Source Routing with suitable example. | (9) |
| 13 | a) Explain channel allocation strategies in cellular networks? | (5) |

- b) List out two Hand-off prioritization techniques? (4)
- 14 a) Describe the following Terminologies used in Mobile IP (3)
a) Home Agent (HA) b) Foreign Agent (FA) c) Care-of Address (COA)
- b) Explain the agent discovery process in Mobile IP. (6)

PART E

Answer any four full questions, each carries 10 marks.

- 15 Explain about Mobile Transport Layer approaches and compare it's pros and cons? (10)
- 16 With neat sketches and illustration, discuss the WAP architecture in detail. (10)
- 17 a) What are uses of following components in Mobile computing? (6)
a) XML b) J2ME c) JavaCard
- b) List any four features of following mobile operating systems? (4)
a) PalmOS b) Android
- 18 a) Explain the working procedure and protocol stack architecture of Bluetooth technology with suitable diagrams. (6)
- b) Briefly explain Super core concept in 5G? List two benefits? (4)
- 19 a) Discuss about the various security issues in mobile networks? (6)
- b) What are the benefits of 5G wireless technology? (4)
- 20 a) Explain the LTE architecture and Interface? (6)
- b) Compare Li-Fi and Wi-Fi. (4)
