



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.C.A. DEGREE EXAMINATION – COMPUTER APPLICATIONS

FIFTH SEMESTER – NOVEMBER 2023

UCA 5602 – MOBILE COMPUTING

Date: 16-11-2023

Dept. No.

Max. : 100 Marks

Time: 09:00 AM - 12:00 NOON

SECTION A - K1 (CO1)

Answer ALL the Questions -

(10 x 1 = 10)

1. Definitions

- a) Mobile computing
- b) IMEI
- c) Spread spectrum technology
- d) UDP
- e) Content Distribution Network

2. Fill in the blanks

- a) ----- acts as an interface between transport bearers.
- b) The network of piconets is called -----.
- c) Push transactions are always initiated by the -----.
- d) The ----- defines the current location of the Mobile node from an IP point of view.
- e) Compression and decompression techniques roughly use the same techniques and time in -----.

SECTION A - K2 (CO1)

Answer ALL the Questions

(10 x 1 = 10)

3. Match the following

- a) Transcoding - (i) Channel coding
- b) Error detection and correction - (ii) Medical images
- c) Adhoc Mode - (iii) Loss of TCP semantics
- d) Indirect TCP - (iv) ICAP
- e) Lossless compression - (v) IBSS

4. True or False

- a) Mobile networks are NOT wireless networks.
- b) Interleaving step refers to rearranging a group of bits to improve the performance of error correction.
- c) MMS Relay is the entity that interacts with the user.
- d) Correspondent Node represents the partner for the Mobile Node.
- e) RSVP is responsible for the negotiation of connection parameters with the routers.

SECTION B - K3 (CO2)

Answer any TWO of the following

(2 x 10 = 20)

- 5. Construct the 3-tier architecture for mobile computing with a neat diagram.
- 6. Identify and explain the network operations of GPRS.
- 7. Develop a Mobile Adhoc Network and explain its components and uses.
- 8. Construct the WAP architecture with a neat diagram.

SECTION C – K4 (CO3)

Answer any TWO of the following

(2 x 10 = 20)

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| 9. | Analyse the working of Mobile IP with a case study. |
| 10. | Examine the features of Bluetooth and RFID. |
| 11. | Analyse the architecture of MMS with a diagram. |
| 12. | Compare the Multimedia networking protocols. |

SECTION D – K5 (CO4)

Answer any ONE of the following

(1 x 20 = 20)

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| 13. | Explain the architecture of GSM and its entities. |
| 14. | Interpret the working of Indirect and Snooping TCP with supporting diagrams. |

SECTION E – K6 (CO5)

Answer any ONE of the following

(1 x 20 = 20)

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| 15. | Elaborate the working of Wireless LAN, its types and advantages. |
| 16. | Discuss on the characteristics of Traditional TCP and three-way handshaking of connection establishment. |

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