



B.Tech VII Semester Regular/Supplementary Examinations, November 2022

MOBILE COMPUTING
(Professional Elective)
(Computer Science and Engineering)

Maximum Marks: 70

Date:01.12.2022 Duration: 3 hours

- Note:
- 1.This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

- 1 What is the role of HLR entity of a GSM network? (10x2M=20 Marks)
- 2 What is the use of GRPS in mobile phones?
- 3 Differentiate between traditional IP and mobile IP.
- 4 Is IEEE 802.11 and Wi-Fi same?
- 5 What are the main drawbacks of I-TCP.
- 6 What is the primary function of snooping TCP?
- 7 What are the applications of mobile computing?
- 8 What is the index-based methods in mobile computing?
- 9 What kind of operating system is windows CE?
- 10 Differentiate between foreign agent and home agent.

Part-B

Answer All the following questions.

(5X10M=50Marks)

- 11 A. What are the advantages of GPRS over GSM? Also explain the architecture of GPRS. 5M
B. What kind of security and new data services are available in GSM? 5M
- OR
- 12 A. Define handover, give different types of handovers and also describe the process of call handover when a mobile device moves 5M
B. Bring out the limitations of mobile devices. Explain any one in detail. 5M
- 13 A. Explain how Multiple Access with Collision Avoidance (MACA) can avoid hidden terminal and exposed terminal problems. 5M
B. Give six functional differences between CDMA and SDMA. 5M
- OR
- 14 A. What is Mobile IP? Explain agent recovery, registration and encapsulation 5M
B. Explain DHCP protocol. How does a DHCP server bind a mobile node with an IP address. 5M

- 15 A. What happens in the case of I-TCP if the mobile is disconnected? Discuss. 5M
B. Differentiate between Proactive and Reactive Routing Protocols. 5M
- OR
- 16 A. Discuss how snooping TCP acts as transparent TCP and explain the role of foreign agent in it in detail. 5M
B. Explain VANET and list out the applications of VANETs. 5M
- 17 A. Explain the architecture of WTA. 5M
B. Explain the architecture of WMI. 5M
- OR
- 18 A. Explain Mobile payment system. 5M
B. Explain the architecture of WDP. 5M
- 19 A. What are the OSs available for mobile devices? Brief out any two OS's? 5M
B. Describe the functions of mobile agent along with its characteristics and advantages. 5M
- OR
- 20 A. List various MANET routing algorithms and explain DSDV routing algorithm. 5M
B. Compare and contrast WAP 1.1 and WAP 2.0. 5M