

Register No:

Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

EIGHTH SEMESTER B.TECH DEGREE EXAMINATION(R), MAY 2024**Computer Science and Engineering****(2020 SCHEME)****Course Code : 20CST474****Course Name : Mobile Computing****Max. Marks : 100****Duration:3 Hours****PART A***(Answer all questions. Each question carries 3 marks)*

1. Explain different types of middlewares in the architecture of mobile computing.
2. List any three services provided by Internet Content Adaptation Protocol(ICAP) servers.
3. Write a note on handover.
4. Compare and contrast Low Earth Orbit(LEO) and Medium Earth Orbit(MEO) satellite systems.
5. How does the 802.11 architecture handle the mobility of devices within a WLAN?
6. Draw and explain MAC frame format of IEEE 802.11
7. Write a note on Wireless Transport Layer Security?
8. What are the functions of Wireless Transport Layer Security(WTLS) in Wireless Application Protocol(WAP) architecture.
9. What is Wireless Asynchronous Transmission Mode(WATM)? How does it improve over Asynchronous Transmission Mode(ATM)?
10. Distinguish between stream ciphering and block ciphering.

PART B*(Answer one full question from each module, each question carries 14 marks)***MODULE I**

11. What are middlewares and gateways? Explain different types of middleware components and gateways at different layers of mobile computing architecture. 14

OR

12. How is content rating and filtering helpful in classifying content? What is the role of RSACI and PICS in classifying content? 14

MODULE II

13. Describe the core principle behind Frequency Hopping Spread Spectrum (FHSS). How does it differ from Direct Sequence Spread Spectrum (DSSS)? 14

OR

14. Explain different services provided by GSM. 14

MODULE III

15. Explain medium access scheme of HIPERLAN 1. 14

OR

16. Explain Bluetooth protocol stack with neat diagram. 14

MODULE IV

17. With the help of a neat sketch, describe the architecture of Wireless Application Protocol(WAP). 14

OR

18. Discuss the steps involved in the IP packet delivery and agent discovery among mobile nodes with the help of suitable diagrams. 14

MODULE V

19. Compare and contrast traditional security models (e.g., Bell-LaPadula, Biba) with the Zero-Trust Architecture (ZTA) approach. Discuss the advantages of ZTA for mobile security in cloud-based environments.? 14

OR

20. How can MPLS be used to support secure network slicing for mobile security in 5G deployments? 14
