2054
M.E. [Computer Science and Engineering (Cyber Security)]
Second Semester
CSN-8203: Mobile Wireless and VOIP Security

Time allowed: 3 Hours

Max. Marks: 50

NOTE: *Attempt **five** questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.*

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I. (a) How does mobility impact the security of mobile networks?

(b) Draw the architecture and components of Bluetooth technology.

(c) What is Wireless Application Protocol (WAP) and how does it facilitate mobile internet browsing?

(d) List common security threats faced by 802.11 wireless LANs?

(e) Define Voice over IP (VoIP) and explain its significance in modern telecommunications.

(5×2)

UNIT-I

II. (a) Describe common attacks encountered in the mobile environment and the corresponding security measures to mitigate them.

(b) Discuss the limitations of the mobile environment that pose challenges to ensuring security.

(5,5)

III. (a) Describe the security considerations and challenges associated with SMS/MMS messaging in mobile networks. How can these vulnerabilities be mitigated?

(b) Discuss the security features integrated into GSM networks to safeguard against unauthorized access and eavesdropping.

(5,5)

IV. (a) Describe the protocol stack used in 4G and 5G networks, outlining the layers and their functions. How does this stack contribute to the efficient operation of these networks?

(b) Identify and explain the challenges associated with the deployment of 5G networks.

(6,4)

UNIT-II

V. (a) Compare the security features and requirements of 802.11 wireless LANs with newer wireless communication technologies. How has security evolved to meet the challenges posed by modern wireless networking environments?

(b) Draw and label the architecture of an 802.11 wireless LAN (WLAN), including all key components and their interconnections.

(6,4)

VI. (a) Describe the role of the Session Initiation Protocol (SIP) in enabling communication services over IP networks.

(b) Compare and contrast the VoIP implementations of Skype and Google. What are the unique features and technologies used by each platform to deliver voice and video communication services?

(4,6)

VII. Write short note on:-

(a) Attacks against the VoIP network

(b) DDoS Attacks,

(c) Challenges against 10 implementing VOIP network

(10)

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