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R-14

Code: 4G385

IV B.Tech. II Semester Supplementary Examinations Nov/Dec 2018

Wireless Communication & Networks

(Electronics & Communication Engineering)

Max. Marks: 70

Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)

UNIT-I

1. Discuss the similarities and differences between a conventional cellular radio system and a space – based (satellite) cellular radio system. Which system could support a large number of users for a given frequency allocation? Why? 14M

OR

2. a) Write the features of FDMA and explain the Non-linear effect in FDMA. 6M
b) A normal GSM has 3 start bits, 3 stop bits 26 training bits for allowing adaptive equalization, 8,25 guard bits and 2 bursts of 58 bits of encrypted data which is transmitted at 270.833 kbps in the channel. Find
- i. Number of overhead bits per frame, b_{oh}
 - ii. Total number of bits per frame
 - iii. Frame rate
 - iv. Time duration of a slot
 - v. Frame efficiency 8M

UNIT-II

3. a) Explain the following:
i. Circuit switching.
ii. Packet switching. 9M
b) Explain the limitations of Wireless Networks. 5M

OR

4. a) Compare and contrast the OSI-7 network model with SS7 protocol model. 7M
b) Briefly explain the differences between wireless and fixed telephone networks. 7M

UNIT-III

5. a) What are the Service primitives of WDP? 7M
b) Illustrates the key components in WAP environment. 7M

OR

6. a) What are the services provided by the WSP? 7M
b) Write short notes on wireless data protocol. 7M

UNIT-IV

7. a) Explain Narrow band microwave LANs with practical example. 7M
b) What are the security services provided by the Bluetooth? 7M

OR

8. a) Explain the Radio specifications of Bluetooth. 7M
b) Write short note on Link manager specifications. 7M

UNIT-V

9. a) Explain about Data oriented CDPD Network. Enlist the uses of CDPD Network. 7M
b) Why do we need Ad-hoc networking and WPAN? Discuss them. 7M

OR

10. a) Explain Short Messages Services in GSM. 7M
b) Write short note on HIPERLAN. 7M
