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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 )

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**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

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