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**R-15**

**Code: 5G384**

IV B.Tech. II Semester Supplementary Examinations July 2021

**Wireless Communications & Networks**

( Electronics and Communication Engineering )

Max. Marks: 70

Time: 3 Hours

Answer any five full questions by choosing one question from each unit ( 5x14 = 70 Marks )

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Marks CO Blooms Level

**UNIT-I**

1. a) What are the limitations of conventional telephone system? Describe the various generations of wireless mobile communication. 7M
- b) What is the use of multiple access techniques? What type of access technique is used in G S M. Explain the same in detail. 7M

**OR**

2. a) Listing any 4 types of wireless communication systems, explain in detail with respect to the advantages and disadvantages offered by each of them Justify why you feel mobile communication has seen such a vast acceptance in modern society. 6M
- b) What is packet radio protocol? Explain pure and slotted Aloha in detail? 8M

**UNIT-II**

3. a) With block diagram, explain the first generation of cellular radio network. 6M
- b) What are the different classes of service provided by SSCP? Hence explain what you understand by the terms connectionless connection-oriented. 8M

**OR**

4. a) Explain in detail how Traffic routing takes place in wireless networks 7M
- b) Draw a figure of SS7 protocol standard and explain it. 7M

**UNIT-III**

5. a) Describe the three WTP Transaction Classes that may be invoked by WSP. 7M
- b) What are the various client components in a Wireless Application Environment? Elaborate. 7M

**OR**

6. a) Explain the two Mobile IP Registration Messages carried in UDP segments for the registration operation. 6M
- b) Explain the WAP Protocol Stack in detail. 8M

**UNIT-IV**

7. a) Describe Spread spectrum LANs. 7M
- b) Explain the frame format for 802.11 in detail. 7M

**OR**

8. a) Discuss in detail the three transmission techniques commonly used for IR data transmission. 7M
- b) What are the different modes of 802.11 architecture? Which mode can be used to obtain a higher coverage area and how? 7M

**UNIT-V**

9. a) Which are the three interfaces in CDPD that specify a protocol stack corresponding to the OSI model. Explain them. 7M
- b) Explain the location and handoff management procedures in GPRS. 7M

**OR**

10. a) Explain the Physical elements that make up the CDPD architecture. 7M
- b) With a figure, explain the channel access cycle in HIPRLAN-1. 7M

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