Hall Ticket Number:

III/IV B.Tech (Supplementary) DEGREE EXAMINATION

November,2019   **Information Technology**
Sixth Semester   **Wireless Networks**
Time: Three Hours   **Maximum :** 60 Marks

Answer Question No.1 compulsorily.   (1X12 = 12 Marks)
Answer ONE question from each unit.   (4X12=48 Marks)

1   **Answer all questions**   (1X12=12 Marks)
   a)   List various mobile and wireless devices.
   b)   Draw the radiation pattern of a simple dipole.
   c)   What is frequency division multiplexing?
   d)   Draw the frame structure of TETRA.
   e)   Which numbers plays a major role in locating a mobile station?
   f)   List the applications of satellites in the context of mobile communications.
   g)   What are the disadvantages of infrared technology?
   h)   What is reverse tunnelling?
   i)   How can DHCP be used for mobility and support of mobile IP?
   j)   Why slow start mechanism fails in mobile IP?
   k)   List the operations of PUSH access protocol.
   l)   Which WTP class reflects the typical web access?

UNIT I

2   a)   Describe the history of wireless communications.   6M
     b)   Explain the functions of each layer of OSI reference model in a wireless and mobile   6M
           environment.

(OR)

3   a)   Discuss various signal propagation effects.   6M
     b)   With suitable examples explain CDMA system.   6M

UNIT II

4   a)   Draw the basic architecture of the UTRA network and explain.   8M
     b)   Describe the two basic classes of UMTS handovers.   4M

(OR)

5   a)   What characteristics do the different satellite orbits have? What are the pros and cons?   6M
     b)   Draw the DAB frame structure and components of a DAB sender.   6M

UNIT III

6   a)   Explain the functions of Bluetooth baseband, link manager and logical link control &   8M
           adaptation protocols.
     b)   Draw the basic structure of HiperLAN2 MAC frames.   4M

(OR)

7   a)   Discuss the requirements, entities and terminology of mobile IP.   6M
     b)   Write about IP-in-IP encapsulation and minimal encapsulation techniques.   6M

UNIT IV

8   a)   How Indirect TCP increases TCP's performance in wireless and mobile environment?   6M
     b)   Describe the functionality of snooping TCP.   6M

(OR)

9   a)   Draw and explain the WAE logical model.   6M
     b)   Illustrate the WTA functionality.   6M