KADI SARVA VISHWAVIDHYALAYA

M.E. Semester 1

Subject Name: Wireless Networking & Mobile Computing

Date: 25/5/13   Time: 3 Hrs.   Total Marks: 70

Instructions:

1. Answer each section in separate Answer sheet.
2. Use of Scientific calculator is permitted.
3. All questions are Compulsory.
4. Indicate **clearly**, the options you attempt along with its respective question number.
5. Use the last page of main supplementary for **rough** work.

Section -1

Q - 1.

(A)	Describe wireless Networking	[5]
(B)	Distinguish between wireless network and fixed telephone network.	[5]
(C)	List three different ways of Categorizing Communications Satellites.	[5]

OR

(C)	List three different ways of Classifying Satellite Orbits	[5]

Q - 2.

(A)	What is the principle of Frequency reuse in the context of Cellular network	[5]
(B)	What are the primary cause of atmospheric attenuation for Satellite Communication?	[5]

OR

(A)	List five ways of Increasing the Capacity of Cellular System.	[5]
(B)	List & explain four application areas of Wireless LANs	[5]

Q - 3.

(A)	What are some Key Characteristics that distinguish 3G cellular system from 2G cellular system?	[5]
(B)	List and briefly define IEEE 802.11 Services	[5]

OR

(A)	List & briefly define key requirements for wireless LANs	[5]
(B)	Short Note: Wi-Fi	[5]

Section -2

Q - 4.

    (A)   · Enumerate briefly applications of Mobile Communications.   [5]

    (B)   Short note: FDMA   [5]

    (C)   Explain Hidden & Exposed terminal   [5]

<div align="center">OR</div>

    (C)   Explain near & far terminal   [5]

Q - 5.

    (A)   Briefly write 4 requirements of mobile IP.   [5]

    (B)   List the entities of mobile IP and describe data transfer from a mobile node   [5]
to a fixed node and vice-versa

<div align="center">OR</div>

    (A)   Explain how tunneling works in general & especially for mobile IP.   [5]

    (B)   Short note: Indirect TCP.   [5]

Q - 6.

    (A)   What is the basic purpose of DHCP? Name the entities of DHCP.   [5]

    (B)   Describe Snooping TCP.   [5]

<div align="center">OR</div>

    (A)   List & brief three routing protocols of mobile Ad-hoc Networks.   [5]

    (B)   Write five applications of Bluetooth.   [5]

Kadi Sarva Vishwavidyalaya

M.E. Semester 1

Subject: Wireless Networking & Mobile Computing

Date: 19/01/2013   Max Marks: 70

Time: 10:00 AM to 01:00 PM

Section – I

Q1. [A] Define: Wireless Networking with examples of different types of Networks [5]
[B] Distinguish between wired and Fixed Telephone Networks [5]
[C] Short note: Wireless Network Architecture [5]
OR
[C] Discuss briefly advantages and applications of Wireless Networks [5]

Q2. [A] What is the principle of frequency reuse in the context of Cellular Networks? List [5]
five ways of increasing the capacity of a cellular system.
[B] Write a note on IEEE 802 architecture [5]
OR
[A] Short note: Wi-Fi [5]
[B] Elaborate IEEE 802.11 Wireless LAN standards. [5]

Q3. [A] Elucidate the various applications of wireless networks and mobile communications [5]
with examples.
[B] Short Note: GSM Signalling Protocol Architecture [5]
OR
[A] Write a note on Satellite Footprint & Atmospheric Attenuation. [5]
[B] List the various types of Satellite orbits & Explain. [5]

Section – II

Q4. [A] What is meant by hidden and exposed terminal problem? Explain using an example. [5]
[B] Distinguish between Classical Aloha & Slotted Aloha [5]
[C] Why does CSMA/CD scheme fail in wireless Network? Explain. [5]
OR
[C] Assume all stations can hear all other stations. One station wants to transmit and [5]
senses the carrier idle. Why can a collision still occur after the start of transmission?
(explain with neat diagram)

Q5. [A] Explain Mobile IP network with diagram. [5]
[B] Short note: (a) Tunnelling (b) Reverse Tunnelling [5]
OR
[A] Distinguish between DSDV and DSR routing [5]
[B] Which are the various improvements in TCP as to Traditional TCP explain each of [5]
them shortly

Q6. [A] Define: Mobile ad-hoc networks and cite some features of it. [5]
[B] How is routing done in ad-hoc network? [5]
OR
[A] Name the requirements of Mobile IP and justify them. Does mobile IP fulfil them [5]
all?
[B] What is the basic purpose of DHCP? Name the entities of DHCP. [5]