C.U.SHAH UNIVERSITY
Winter Examination-2015

Subject Name: Wireless Networking

Subject Code: 5TE01WNT1   **Branch: M.Tech (CE)**

Semester: 1   **Date: 29/12/2015**   **Time: 10:30 To 01: 30**   **Marks: 70**

__Instructions:__
   (1) Use of Programmable calculator and any other electronic instrument is prohibited.
   (2) Instructions written on main answer book are strictly to be obeyed.
   (3) Draw neat diagrams and figures (if necessary) at right places.
   (4) Assume suitable data if needed.

SECTION – I

Q-1	**Attempt the Following questions**	**07**
a.	Which Modulation technique used in GSM?	
b.	Why out of band of radiation is an important issue in designing modulation scheme?	
c.	What is the purpose of guard time?	
d.	What are the types of diversity?	
e.	What is the difference between the access technique of IEEE802.11a and IEEE802.11b?	
f.	Explain about hidden terminal problem.	
g.	Define RFID.	

Q-2	**Attempt all questions**	
a.	Compare FDMA, TDMA and CDMA.	**06**
b.	What is the Doppler spectrum and how can one measure it?	**04**
c.	Compare adhoc and infrastructure topologies.	**04**

OR

Q-2	**Attempt all questions**	
a.	Discuss two ray model for mobile radio environments	**04**
b.	Define Mobile IP. Explain Agent Discovery, Registration and Data Transfer.	**06**
c.	Compare single hop and multihop networks topologies	**04**

Q-3	**Attempt all questions**	
a.	Define Spread Spectrum. Explain Different methods of Spread Spectrum.	**07**
b.	Discuss Bluetooth topology and explain Bluetooth Protocol Stack.	**07**

OR

Q-3		**Attempt all questions**	
	a.	Explain Indirect TCP, Snooping TCP and Mobile TCP.	**06**
	b.	Explain Different generation of wireless Networks.	**08**

SECTION – II

Q-4		**Attempt the Following questions**	**07**
	a.	Define Selective Retransmission with TCP.	
	b.	What are VLR and HLR ? Why do we need them?	
	c.	Define ACI.	
	d.	Why is hexagonal cell shape preferred over square or triangular cell shape to represent the cellular architecture?	
	e.	What are the reasons to perform handoff?	
	f.	Define channel borrowing technique.	
	g.	What is IEEE 802.15 WPAN?	

Q-5		**Attempt all questions**	
	a.	List different types Cell in the cellular hierarchy and compare them in terms of Coverage area antenna site.	**05**
	b.	Explain different types of handover in GSM.	**05**
	c.	Compare CDMA and GSM.	**04**

OR

Q-5		**Attempt all questions**	
	a.	Explain different handoff techniques.	**05**
	b.	Explain the concept of cellular topology and cell fundamentals with examples.	**05**
	c.	Explain in detail about channel allocation technique.	**04**

Q-6		**Attempt all questions**	
	a.	Explain the following: Cell splitting, Cell sectoring, Cell partitioning in detail.	**06**
	b.	Discuss Signal to interference ration calculation.	**08**

OR

Q-6		**Attempt all Questions**	
	a.	Explain CDMA forward and reverse channel in detail.	**07**
	b.	Explain Wi-Fi architecture. How does it work?	**07**