C.U.SHAH UNIVERSITY
Winter Examination-2018

Subject Name: Mobile Computing and Application Development

Subject Code: 4TE07MCA1   **Branch: B.Tech (CE,IT)**

Semester: 7   **Date: 29/11/2018**   **Time : 10:30 To 01:30**   **Marks : 70**

Instructions:
  (1) Use of Programmable calculator & 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.

Q-1		**Attempt the following questions**	**(14)**
	a)	What is the principle used in multiplexers?	
	b)	What are the types of spread spectrum?	
	c)	At what frequencies ground waves and sky wave propagation takes place?	
	d)	How power saving is achieved by IEEE 802.11 standard?	
	e)	Define a cell.	
	f)	What are the services provided by supplementary services?	
	g)	What is known as 'handoff?	
	h)	Why can't we apply traditional routing algorithms for ad hoc networks?	
	i)	What is an Intent?	
	j)	What are the physical elements of a BTS?	
	k)	Write down Full Form of IMEI and MSISDN	
	l)	State the different types of additional propagation effects of a signal.	
	m)	Name the languages supported for Android development.	
	n)	Difference between 2G and 2.5G.	

Attempt any four questions from Q-2 to Q-8

Q-2		**Attempt all questions**	
	a)	Explain three tier architecture of mobile computing.	**(07)**
	b)	What is RFID? Define Active RFID and Passive RFID? Describe application of Active and Passive RFID.	**(07)**

Q-3		**Attempt all questions**	
	a)	Draw and Explain GSM Architecture with roles of its components	**(07)**
	b)	What is Piconet and Scatternet in Bluetooth? How many Maximum numbers of devices can communicate within one piconet? Draw the Bluetooth protocol stack and explain the host controller interface.	**(07)**

Q-4		**Attempt all questions**	
	a)	What is the principle of frequency reuse in context of cellular networks? List the ways of increasing the capacity of a cellular system?	**(07)**

	b)	Define Mobile Ad hoc Networks. Discuss its characteristics and limitations.	**(07)**

Q-5   **Attempt all questions**

a) Explain PUSH and PULL short messaging service in detail and also list and explain the strengths of SMS. **(07)**

b) Why conventional network IP is not suitable for mobile environment? How Mobile IP works? **(07)**

Q-6   **Attempt all questions**

a) Explain Indirect TCP and Snooping TCP in detail. **(07)**

b) Explain Wi-Fi and Wi-Max technology in detail. also discuss the differences. **(07)**

Q-7   **Attempt all questions**

a) Explain the Android Architecture with a neat diagram. **(07)**

b) Discuss data services in GPRS. Describe applications suitable for GPRS. **(07)**

Q-8   **Attempt all questions**

a) Define the Android Layout. Explain the various Android Layouts. **(07)**

b) What is CDMA technology? Explain Direct Sequence Spread Spectrum. **(07)**