

Enrollment No.....



Faculty of Science

End Sem (Even) Examination May-2019

CA3EG11 Wireless and Mobile Computing

Programme: BCA

Branch/Specialization: Computer
Application**Duration: 3 Hrs.****Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. Commonly used mode for 3G networks is **1**
(a) TDMA (b) FDMA (c) TDD (d) FDD
- ii. The minimum spectrum allocation required for W-CDMA is **1**
(a) 5 MHz (b) 2 MHz (c) 500 KHz (d) 100 KHz
- iii. Global Service for Mobile (GSM) uses two bands for duplex **1**
(a) Data (b) Communications
(c) Signals (d) Stations
- iv. The advantage of using frequency reuse is **1**
(a) Increased capacity
(b) Limited spectrum is required
(c) Same spectrum may be allocated to other network
(d) All of these
- v. In IEEE 802.11 frames To DS and from DS define value of two **1**
flags in the
(a) Sequence field (b) Data field
(c) Frame control field (d) Duration field
- vi. What modulation technique does 802.11b wireless use? **1**
(a) DSSS (b) FDSS (c) FMDS (d) OFDM
- vii. DHCP (dynamic host configuration protocol) provides _____ **1**
to the client.
(a) IP address (b) MAC address
(c) URL (d) None of these
- viii. Which of the following services use TCP? **1**
I. DHCP II. SMTP III. HTTP IV. TFTP
(a) I and II (b) II, III and IV
(c) I, II and IV (d) I, III and IV

- ix. Which of the following is a type of program that either pretends to **1**
have or is described as having a set of useful or desirable features
but actually contains damaging code.
(a) Trojans (b) Viruses (c) Worm (d) Adware
- x. An attempt to make a computer resource unavailable to its intended **1**
users is called
(a) Denial-of-service attack (b) Virus attack
(c) Worms attack (d) Botnet process

- Q.2 i. Define the term Antenna. **2**
ii. What are the different multiple access techniques? **3**
iii. Explain three tier architecture of conventional mobile computing. **5**
OR iv. Discuss the Mobile Radio Propagation Effects. **5**
- Q.3 i. What is handover? **2**
ii. Draw and explain GPRS architecture. **8**
OR iii. What is Mobility Management? What are the GSM services? **8**
- Q.4 i. What are the nomenclature of IEEE 802.11a, b, g? **3**
ii. Explain the IEEE 802.11 protocol architecture with a neat diagram? **7**
OR iii. With the help of diagram explain HIPERLAN-protocol architecture. **7**
- Q.5 i. Define the term DHCP and WAP. **4**
ii. What is a mobile IP? Explain discovery, registration and tunneling **6**
with mobile IP.
OR iii. Define Mobile TCP. Discuss selective re-transmission and **6**
transmission-oriented TCP.
- Q.6 Attempt any two:
i. What are the components of a Virus? Discuss the four phases in the **5**
life time of a virus?
ii. What is a Firewall? Discuss any three types of Firewall? **5**
iii. What is the difference bio-metrics and authentication system **5**

Marking Scheme
CA3EG11 Wireless and Mobile Computing

Q.1	i.	Commonly used mode for 3G networks is (d) FDD	1
	ii.	The minimum spectrum allocation required for W-CDMA is (a) 5 MHz	1
	iii.	Global Service for Mobile (GSM) uses two bands for duplex (a) Data	1
	iv.	The advantage of using frequency reuse is (d) All of these	1
	v.	In IEEE 802.11 frames To DS and from DS define value of two flags in the (c) Frame control field	1
	vi.	What modulation technique does 802.11b wireless use? (a) DSSS	1
	vii.	DHCP (dynamic host configuration protocol) provides _____ to the client. (a) IP address	1
	viii.	Which of the following services use TCP? I. DHCP II. SMTP III. HTTP IV. TFTP (b) II, III and IV	1
	ix.	Which of the following is a type of program that either pretends to have or is described as having a set of useful or desirable features but actually contains damaging code. (a) Trojans	1
	x.	An attempt to make a computer resource unavailable to its intended users is called (a) Denial-of-service attack	1
Q.2	i.	Antenna.	2
	ii.	Multiple access techniques 1 mark for each technique (1 mark * 3)	3
OR	iii.	Three tier architecture of conventional mobile computing.	5
	iv.	Mobile Radio Propagation Effects.	5
Q.3	i.	handover	2
	ii.	GPRS architecture Diagram	8 4 marks
OR	iii.	Mobility Management	8 4 marks

		GSM services	4 marks	
Q.4	i.	Nomenclature of IEEE 802.11a, b, g 1 mark for each	(1 mark * 3)	3
	ii.	IEEE 802.11 protocol architecture Diagram	4 marks	7
OR	iii.	HIPERLAN-protocol architecture.	3 marks	7
Q.5	i.	DHCP	2 marks	4
		WAP	2 marks	
	ii.	Mobile IP	3 marks	6
		Discovery with mobile IP	1 mark	
OR		Registration with mobile IP	1 mark	
		Tunneling with mobile IP.	1 mark	
	iii.	Mobile TCP	2 marks	6
		Selective re-transmission	2 marks	
Q.6		Transmission-oriented TCP.	2 marks	
		Attempt any two:		
	i.	Components of a Virus	2 marks	5
		Four phases in the life time of a virus	3 marks	
	ii.	Firewall	2 marks	5
		Any three types of Firewall	3 marks	
	iii.	Difference bio-metrics and authentication system		5
