USN	 			·		i . '	
	. 1			l 1			ļ. I
TICAL		F			<u> </u>	<u> </u>	
DOM	 		 				

Fourth Semester M.C.A Degree Examination, January/February 2004

Master of Computer Applications

Wireless & Mobile Communication

Time: 3 hrs.]

[Max.Marks: 100

Note: 1. Answer any FIVE full questions. 2. All questions carry equal marks.

1. (a) Explain how a cellular telephone call is made?

(8 Marks)

- (b) List and explain the components in the handset of a cellular telephone.
 - (6 Marks)
 - (c) Explain the concept of cellular frequency reuse. Illustrate with an example. (6 Marks)
- 2. (a) Explain the factors that influence the choice of digital modulation. (5 Marks)
 - (b) Explain the following terms:
 - i) Transciever ii) Hand off iii) Control channel iv) Mobile station Full duplex system.
 - (c) Determine the theoretical maximum data rate that can be supported in a channel. Calculate the same for a 600kHz channel for signal to noise ratio of 20db. (8 Marks)
 - 3. (a) Explain the channel assignment strategies.

(10 Marks)

- (b) Define the following terms:
 - i) Blocked call ii) Grade of service iii) Request rate.

(6 Marks)

(c) Explain the two types of system generated cell interference.

(6 Marks)

- 4. (a) If a signal to interference ratio of 15db is required for satisfactory forward channel performance of a cellular system, what is the frequency reuse factor and cluster size that should be used for maximum capacity if the path loss exponent is i) n=4 ii) n=3? Assume that there are 6 cochannel cells in the first tier, and all of them are at the same distance from the mobile. Use suitable
 - (b) Explain $\pi/4$ QPSK transmission and detection technique with neat block diagram. (8 Marks)
 - 5. (a) Explain FDMA and TDMA techniques.

(6 Marks)

- (b) Explain IS-95 CDMA standard.
- (c) Describe the handshaking signals between the cell phone subscriber and (6 Marks) PSTN. (10 Marks)
- 6. (a) Describe the GSM system architecture.

(b) Explain the call handling in the AMPS system.

(10 Marks)

Contd.... 2

Page No... 2

Contract His

7. (a) Explain the salient features of CDMA cellular systems.

(10 Marks)

(b) Explain the salient features of various mobile radio standards around the globe. The season of the state of the (10 Marks)

g enderge grand from the second of

- Write short notes on : 8.
 - Mobile IP-TCP i)
 - ii) Internet over wireless
 - iii) paging system
 - iv) Trunking theory.

(5×4=20 Marks)

unduscription ophidae. The dolerenes

of again in dimensional or or region or record ranskin svojini (NA)

的经济特别的的 经保险部分 医重点探测 法国际 医皮肤炎 化二氯甲基苯甲基甲基

Acceptance of the Commence of

STANDARDER

a da suarragidan ari asaa mafa saga san muundan mii milan ahkan da ka kaasi asa. Hara the participations of the property of between the street of the second of the second of the second of the second

Letter & September 2014 (Spin Argument Line Communication

HIMMU GOD OBERTADA ONI DAMBERTA PERIANG EN ESCOLO EN EL EL EL EL EL

A Particular Company of the Company of

of the law Second Membership, record broads of the colors

the constitution of the co

and the dimediate respiring time and the people of the color

ing grand to be

Setting the set of the