

MW-146

003-007407

**M.C.A. (CBCS) (Sem.-IV) Examination
May-2014**

Paper ECA4035 : Mobile Computing

**Faculty Code : 003
Subject Code : 007407**

Time : 2½ Hours]

[Total Marks : 70

1. Answer the following multiple choice questions :

15

- (1) In CDM CI stands for _____
- (a) Code Sequence (b) Constant
(c) Chip Sequence (d) None of these
- (2) UMTS stands for
- (a) Universal Mobile Telecommunication System
(b) Universal Mobile telephone System
(c) Universal Mobility telephonic system
(d) None of these
- (3) Synchronization is not necessary in _____ multiplexing.
- (a) Time division (b) Code division
(c) 1 and 2 both (d) None of these
- (4) When an object is large compared to the wave length of the signal, occurs _____.
- (a) scattering (b) Reflection
(c) blocking (d) None of these
- (5) _____ is a process in which energetic particles or energetic waves travel through a vacuum.
- (a) multiplexing (b) Modulation
(c) Radiation (d) None of these
- (6) Which one is not the attribute of sinwave signal
- (a) frequency (b) phase
(c) amplitude (d) period

- (7) Signals that repeat themselves over fixed intervals of time are said to be _____
(a) aperiodic (b) repeating signals
(c) periodic (d) None of these
- (8) Frequency is always higher than wavelength, this statement is
(a) True (b) False
(c) Cannot Say (d) None of these
- (9) Baud rate is equal to
(a) bauds (per second) * bit rate
(b) bauds(per minute) * bit rate
(c) bauds(per second) / bit rate
(d) bauds(per minute) / bit rate
- (10) In _____, nodes within two different networks cannot communicate with each other.
(a) ad-hoc network (b) infrastructure based network
(c) peer to peer network (d) 1 and 3 both
- (11) Which standard uses OFDM process ?
(a) IEEE 802.11 (b) IEEE 802.11 a
(c) IEEE 802.11 b (d) None of these
- (12) In Cellular system based station is placed _____
(a) in the middle (b) at the border
(c) 1 and 2 both (d) None of these
- (13) In signal, 1/4 cycle means _____.
(a) 0 degree phase (b) 90 degree phase
(c) 180 degree phase (d) 270 degree phase
- (14) In _____ service offers larger message size i.e. 760 characters, formatted text, image, ringtone
(a) SMS (b) EMS
(c) MMS (d) 2 and 3 both
- (15) _____ Waves with low frequencies follow the earth surface and can propagate long distances. These waves are used for Submarine Communication.
(a) Sky waves (b) Ground waves
(c) LOS (d) All of these

2. Attempt any five of the following : 15
- (1) Explain Signals in detail.
 - (2) Differentiate between infra red and radio transmission.
 - (3) Explain multiplexing in detail and list out types of multiplexing. Explain any one in detail.
 - (4) What is IPV6 ?
 - (5) Explain File System Code for mobile computing.
 - (6) Explain Bluetooth in detail.
3. Attempt any **three** of the following : 15
- (1) Explain Spread Spectrum in detail.
 - (2) Write a short note on FDMA.
 - (3) Differentiate between traditional TCP and indirect TCP.
 - (4) Explain 802.11 System architecture in detail.
4. Attempt any two of the following : 15
- (1) Explain TCP over 2.5/3G wireless network and performance enhancing proxies in detail.
 - (2) List out protocols of Mobile computing and explain any two in detail.
 - (3) What is CDMA and W-CDMA in detail and differentiate between them.
5. Attempt any **one** of the following : 10
- (1) Explain TDMA and SDMA in detail.
 - (2) Explain MMS in detail and advantages and disadvantages of MMS over SMS in detail.
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1. Answer the following multiple choice questions :

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(1) IPV6 uses _____ bytes.

(a) 16

(b) 128

(c) 32

(d) None of these

(2) Which of the following is not in IPV4 ?

(a) Header includes options

(b) Header includes a checksum

(c) Does not support multicast

(d) None of these

(3) Which of the following is part of GSM ?

(a) MS

(b) BSS

(c) OSS

(d) All of the above

(4) Which of the following is not supported by MXE node ?

(a) Voice

(b) Fax

(c) Data messaging

(d) None of these

(5) Which of the following is not in GPRS ?

(a) Circuit switched

(b) Packet switched

(c) Data speed up to 160 Kbps

(d) None of these

- (6) Which of the following is in channel reservation ?
- (a) ALOHA
 - (b) TDMA
 - (c) CSMA/CD
 - (d) None of these
- (7) Bluetooth provides data transfer at rate of
- (a) 4 Mbps
 - (b) 1 Mbps
 - (c) 3 Mbps
 - (d) None of these
- (8) WAE stands for
- (a) Wireless Application Encoding
 - (b) Wireless Application Enhancement
 - (c) Wireless Application Environment
 - (d) None of these
- (9) Which of the following is not the component of WAP ?
- (a) WAP enabled handset
 - (b) WAP proxy
 - (c) Web Server
 - (d) None of these
- (10) Which of the following is not the mobile IP support service ?
- (a) Agent discovery
 - (b) Tunneling
 - (c) Message passing to the agent
 - (d) None of these
- (11) GPRS stands for
- (a) Global Packet Radio Service
 - (b) General Package Radio Service
 - (c) General Packet Radio Service
 - (d) None of these

- (12) SMMO stands for
- (a) Short Message Mobile Outgoing
 - (b) Short Message Mobile Originated
 - (c) Short Message Mobile Organized
 - (d) None of these
- (13) Which of the following standard gives WLAN operations at data rate up to 54 Mbps ?
- (a) IEEE 802.11b
 - (b) IEEE 802.11a
 - (c) IEEE 802.11
 - (d) All of the above
- (14) PSTN stands for
- (a) Public Switched Telephone Network
 - (b) Private Switched Telephone Network
 - (c) Public Switched Technical Network
 - (d) None of these
- (15) Mobile phone uses
- (a) Half Duplex
 - (b) Full Duplex
 - (c) (a) and (b) both
 - (d) None of these

2. Attempt any **five** of the following :

15

- (1) Differentiate: IPV4 Vs IPV6.
- (2) Differentiate: Infrared Vs Radio transmission.
- (3) Explain the process of outgoing call in GSM.
- (4) Only writes the step for the working mechanism of MMS.
- (5) List the different application of GPRS.
- (6) List the feature of FDMA.

3. Attempt any **three** of the following : 15
- (1) Write short note on infrastructure based network.
 - (2) Explain architecture of IPV6.
 - (3) Briefly explain DHCP mechanism.
 - (4) Explain in brief the architecture of WAP.
4. Attempt any **two** of the following : 15
- (1) Explain architecture of Bluetooth in brief.
 - (2) Explain the architecture of IEEE 802.11 in brief.
 - (3) List and explain the phases of mobile IP in brief.
5. Attempt any **one** of the following : 10
- (1) What is mobile IP ? List and explain the component of mobile IP in detail.
 - (2) Explain SMS architecture in detail.
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