



BRAINWARE UNIVERSITY
Term End Examination 2020 - 21
Programme – Master of Computer Applications
Course Name – Mobile Computing
Course Code - MCA501A

Semester / Year - Semester V

Time allotted : 85 Minutes

Full Marks : 70

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 70=70

1. *(Answer any Seventy)*

(i) In 1900-MHz band, a mobile station needs more

- | | |
|-----------------|-----------|
| a) Instructions | b) Power |
| c) Signals | d) Frames |

(ii) Traffic channels in forward transmission of telephony, carrying digitized voice from the base station to the mobile stations are Channels 8 to 31 and

- | | |
|-------------|-------------|
| a) 32 to 40 | b) 32 to 63 |
| c) 32 to 60 | d) 33 to 63 |

(iii) The smallest of the short range wireless networks, designed to be embedded in mobile devices such as cell phones and credit cards

- | | |
|--------------------------------|-----------------------------------|
| a) Pervasive Computing | b) Mobile Computing |
| c) Personal Area Network (PAN) | d) Near-Field Communication (NFC) |

(iv) The modulation technique used for mobile communication systems during world war II was

- | | |
|-------------------------|-------------------------|
| a) Amplitude modulation | b) Frequency modulation |
| c) ASK | d) FSK |

(v)

The first collision free protocol is

- | | |
|----------------------|--------------|
| a) | b) |
| Binary countdown | Basic bitmap |
| c) | d) |
| Reservation protocol | SAP |

(vi) Paging systems could be used to

- | | |
|--------------------------|-------------------------------|
| a) Send numeric messages | b) Send alphanumeric messages |
| c) Voice message | d) All of these |

(vii) IMT-2000 is a digital mobile system that functions as

- | | |
|----------------|------------------|
| a) Transmitter | b) Receiver |
| c) Transceiver | d) None of these |

(viii) Carrier frequency of a TV remote control is in the range

- | | |
|-----------------|--------------|
| a) of Infra red | b) < 100 MHz |
| c) < 1 GHz | d) < 2 GHz |

(ix) Half duplex system for communication has

- | | |
|--|--|
| a) Communication in single direction | b) Communication in single direction at a time |
| c) Communication in both directions at the same time | d) None of these |

(x) MIN stands for

- | | |
|---------------------------------|--------------------|
| a) Mobile Identification Number | b) Mobile Internet |
| c) Mobility In Network | d) None of these |

(xi) The process of transferring a mobile station from one base station to another is

- a) MSC
- b) Roamer
- c) Hand off
- d) Forward channel

(xii) PCN is

- a) Wireless concept of making calls
- b) For receiving calls
- c) Irrespective of the location of the user
- d) All of these

(xiii) Mobile commerce transactions targets to individuals in specific locations, at specific times

- a) Location-Based Commerce (L-Commerce)
- b) Personal Area Network (PAN)
- c) Near-Field Communication (NFC)
- d) Mobile Commerce (M-Commerce)

(xiv) A computer environment where virtually every object has processing power together with wireless or wired connections to a global network

- a) Mobile Portal
- b) Mobile Computing
- c) Voice Portal
- d) Pervasive Computing

(xv) A high-bandwidth wireless technology with transmission speeds in excess of 100 Mbps that can be used for applications such as streaming multimedia from, say, a personal computer to a television

- a) Satellite Radio
- b) Infrared
- c) Ultra-Wideband (UWB)
- d) Propagation Delay

(xvi) A Web site with an audio interface

- a) Mobile Portal
- b) Bluetooth
- c) Voice Portal
- d) Hotspot

(xvii) Disadvantages of packet radio are

- a) Induced delays
- b) Low spectral efficiency
- c) Large spectrum required
- d) Both Induced delays and Low spectral efficiency

(xviii) Pure ALOHA is a

- a) Random access protocol
- b) Scheduled access protocol
- c) Hybrid access protocol
- d) Demand access protocol

(xix) OFDM is a technique of -1. Encoding digital data ,2. Multiple carrier frequencies,3. Wide band digital communication ,4. 4G mobile communication

- a) 1,2 and 3 are correct
- b) 2 and 3 are correct
- c) 1, 2 and 4 are correct
- d) All the four correct

(xx) What layer in the TCP/IP stack is equivalent to the Transport layer of the OSI model?

- a) Application
- b) Host to host
- c) Internet
- d) Network Access

(xxi) You want to implement a mechanism that automates the IP configuration, including IP address, subnet mask, default gateway, and DNS information.

Which protocol will you use to accomplish this?

- a) SMTP
- b) SNMP
- c) DHCP
- d) ARP

(xxii) The DoD model (also called the TCP/IP stack) has four layers. Which layer of the DoD model is equivalent to the Network layer of the OSI model?

- a) Application
- b) Host to host
- c) Internet
- d) Network Access

(xxiii) Which of the following protocols uses both TCP and UDP?

- a) FTP
- b) SMTP
- c) Telnet
- d) DNS

(xxiv) How many levels of addressing is provided in TCP/IP protocol?

- a) One
- b) Two
- c) Three
- d) Four

(xxv) TCP/IP is related to _____

- a) ARPANET
- b) OSI
- c) DECNET
- d) ALOHA

(xxvi) Several protocols for upper layers in bluetooth use _____

- a) UDP
- b) HSP
- c) ITC
- d) L2CAP

(xxvii) Protocols are set of rules to govern _____

- a) Communication
- b) Standard
- c) Metropolitan communication
- d) Bandwidth

(xxviii) Checksum is used in Internet by several protocols although not at the

- a) Session layer
- b) Transport layer
- c) Network layer
- d) Data link layer

(xxix) Network layer at source is responsible for creating a packet from data coming from another _____

- a) Station
- b) Link
- c) Node
- d) Protocol

(xxx) Phones the provide two-way radio communications over a cellular network of base stations with seamless handoffs

- a) Bluetooth
- b) Infrared
- c) Cellular Phones
- d) Mobile Wallet

(xxxix) A network composed of nodes in the physical environment that "wake up" at intervals to transmit data to their nearest neighbor node

- a) Mobile Portal
- b) Mesh Network
- c) Bluetooth
- d) Hotspot

(xxxii) A small geographical perimeter within which a wireless access point provides service to a number of users

- a) Hotspot
- b) Infrared
- c) Wireless
- d) Bluetooth

(xxxiii) Electronic commerce transactions that are conducted with a mobile device

- a) Mobile Commerce (M-Commerce)
- b) Mobile Portal
- c) Location-Based Commerce (L-Commerce)
- d) Mobile Computing

(xxxiv) 3G W-CDMA is also known as

- a) UMTS
- b) DECT
- c) DCS-1800
- d) ETACS

(xxxv) CDMA is -1. Spread spectrum technology ,2. Using same communication medium,3. every user stays at a certain narrowband channel at a specific time period ,4. each user has unique PN code

- a) 1,2 and 3 are correct
- b) 2 and 3 are correct
- c) 1, 2 and 4 are correct
- d) All the four correct

(xxxvi) Global Positioning System uses

- a) CDMA
- b) TDMA
- c) SDMA
- d) FDMA

(xxxvii) The advantages of using a CDMA technique over other spread spectrum techniques are-1. Increased capacity ,2. Easier handoff ,3. Better

measure of security ,4. Multiple users occupy different spectrum at a time

- a) 1,2 and 3 are correct
- b) 2,3 and 4 are correct
- c) 1, 2 and 4 are correct
- d) All the four correct

(xxxviii) The advantages of FDMA over TDMA includes-1. Division is simpler ,2. Propagation delays are eliminated ,3. Cheaper filters with less complicated logic functions ,4. Linearity

- a) 1), 2) and 3) are correct
- b) 1) and 2) are correct
- c) 1) and 4) are correct
- d) All four are correct

(xxxix) The interference between the neighboring base stations is avoided by

- a) Assigning different group of channels
- b) Using transmitters with different power level
- c) Using different antennas
- d) All of these

(xl) The shape for the cellular region for maximum radio coverage is

- a) Circular
- b) Square
- c) Oval
- d) Hexagon

(xli) Spectrum Efficiency of a cellular network is

- a) The traffic carried by whole network
- b) The traffic carried per cell divided by the bandwidth of the system and the area of a cell
- c) Expressed in Erlang /MHz /km²
- d) Both The traffic carried per cell divided by the bandwidth of the system and the area of a cell and Expressed in Erlang /MHz /km²

(xlii) In Handoff

- a) Process of transferring the call to the new base station
- b) Transfers the call
- c) New channel allocation is done
- d) All of these

(xliii) In a dynamic channel assignment strategy,

- a) Voice channels are not permanently assigned
- b) The serving base station requests for a channel from MSC
- c) MSC allocates the channel according to the predetermined algorithm
- d) All of these

(xliv) What is the full form of UMTS?

- a) Universal Mobile Telephone System
- b) Ubiquitous Mobile Telephone System
- c) Ubiquitous Mobile Telemetry System
- d) Universal Machine Telemedicine System

(xlv) What is the chip rate of W-CDMA?

- a) 1.2288 Mcps
- b) 3.84 Mcps
- c) 270.833 Ksps
- d) 100 Mcps

(xlvi) What is 3GPP?

- a) Project based on W-CDMA
- b) Project based on cdma2000
- c) Project based on 2G standards
- d) Project based on 2.5G standards

(xlvii) What are the main reasons for using cellular systems?

- a) to support many users, low power and localization
- b) is profit maximization for service providers.
- c) are user localization and frequency reuse.
- d) They are easy to use.

(xlviii) The basic GSM is based on _____ traffic channels

- a) connection oriented.
- b) connection less.
- c) packet switching.
- d) circuit switching

(xlix) Main reasons for a handover in GSM are

- a) Weak signal in cell and heavy cell load
- b) Heavy cell load
- c) Mobile station moves from cell to cell
- d) Low signal strength

(l) Main features of 3G include (in comparison to 2G)

- a) Better voice quality
- b) Higher data rates
- c) Better voice quality and higher and flexible data rates
- d) Power management

(li) Which one of the following events is not possible in wireless LAN?

- a) collision detection
- b) acknowledgement of data frames
- c) multi-mode data transmission
- d) connection to wired networks

(lii) What is Wired Equivalent Privacy (WEP)?

- a) security algorithm for ethernet
- b) security algorithm for wireless networks
- c) security algorithm for usb communication
- d) security algorithm for emails

(liii) Which NetWare protocol works on layer 3—network layer—of the OSI model?

- a) IPX
- b) NCP
- c) SPX
- d) NetBIOS

(liv) Which NetWare protocol provides link-state routing?

- a) NLSP
- b) RIP
- c) SAP
- d) NCP

(lv) What does the following series of commands “Router IGRP 71 network” accomplish?
10.0.0.0 router IGRP 109 network 172.68.7.0

- a) It isolates networks 10.0.0.0 and 172.68.7.0
- b) It loads IGRP for networks 109 and 71
- c) It disables RIP
- d) It disables all routing protocols

(lvi) Default administrative distance of a static route is _____

- a) 0
- b) 90

c) 100

d) 1

(lvii) Which protocol gives a full route table update every 30 seconds?

a) IEGRP

b) RIP

c) ICMP

d) IP

(lviii) What is route poisoning?

a) It sends back the protocol received from a router as a poison pill, which stops the regular updates. The use of variable length subnet masks is permitted

b) It is information received from a router that can't be sent back to the originating router. RIPv2 supports classless routing

c) It prevents regular update messages from reinstating a route that has just come up

d) It describes when a router sets the metric for a downed link to infinity

(lix) Which of the situations might not require multiple routing protocols in a network?

a) When a new Layer 2-only switch is added to the network

b) When you are migrating from one routing protocol to another

c) When you are using routers from multiple vendors

d) When there are host-based routers from multiple vendors

(lx) Which two routing protocols can be redistributed into OSPF by a Cisco router?

a) IP EIGRP and AppleTalk EIGRP

b) AppleTalk EIGRP and RIPv2

c) RIPv2 and IP EIGRP

d) IPX RIP & AppleTalk EIGRP

(lxi) What does administrative distance rank?

a) Metrics

b) Sources of routing information

c) Router reliability

d) Best paths

(lxii) What is the type of network in which the topology change from time to time?

- a) Wi-Fi
- b) Cell Network
- c) LAN
- d) MANET

(lxiii) A wireless system that uses satellites to enable users to determine their position anywhere on Earth

- a) Mobile Computing
- b) Propagation Delay
- c) Wireless Sensor Networks (WSN)
- d) Global Positioning Systems (GPS)

(lxiv) The smallest of the short-range wireless networks, designed to be embedded in mobile devices such as cell phones and credit cards

- a) Pervasive Computing
- b) Mobile Computing
- c) Personal Area Network (PAN)
- d) Near-Field Communication (NFC)

(lxv) The hosts which are basically stationary hosts who move from one fixed site to another from time to time but use the network only when they are physically connected to it are called

- a) Migratory hosts
- b) Stationary hosts
- c) Mobile hosts
- d) Random hosts

(lxvi) Parent class of Activity?

- a) object
- b) context
- c) activityGroup
- d) contextThemeWrapper

(lxvii) Although most people's first thought when they think of Android is Google, Android is not actually owned by Google. Who owns the Android platform?

- a) Oracle Technology
- b) Dalvik
- c) Open Handset Alliance
- d) None of these

(lxviii) Identify false statement

- a) You can find deleted files in recycle bin
- b) You can restore any files in recycle bin if you ever need

- c) You can increase free space on the disk by sending files in recycle bin d) You can right-click and choose Empty Recycle Bin to clean it at once

(lxix) A set of standards for wireless local area networks based on the IEEE 802.11 standard

- a) Ultra-Wideband (UWB) b) Wireless Access Point
c) Wireless d) Wireless Fidelity (WiFi)

(lxx) GSM is an example of

- a) TDMA cellular systems b) FDMA cellular systems
c) CDMA cellular systems d) SDMA cellular systems