Enroll. No._____

MARWADI UNIVERSITY
MU-FOT
CE-FOT1 (MU), IT-FOT1 (MU)
Semester 7 - Summer

Subject : MOBILE COMPUTING (01CE0701)
Date : 10-May-2022 **Time : 3 Hours** **Total Marks : 100**

Instructions :

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Que.1 (A) Answer the following objectives **[10]**

(1) What do you understand by the Non-Line of Sight Transmission or Multipath Propagation in Mobile Computing?

a) Signals gets high bit rate
b) Signals reach without any delay
c) Signals travel in a straight line
d) Signals gets reflected, refracted, scattered with many obstacles in between.
e) None of the Above

(2) What is Frequency Reuse ?

a) Process of selecting and allocating channels
b) Process of selection of mobile users
c) Bothe of these
d) None of these

(3) Firewall is a Network Security entity, what is it?
a) Hardware
b) Software
c) Security Script
d) Both A and B

(4) Which type of antenna is used for centre cells?

a) Dipole antenna
b) Grid antenna
c) Sectored antenna
d) Omnidirectional antenna

(5) What is the Full Form of MANET?

a) Manual Network
b) Mobile Ad-Hoc Network
c) Mobile Access Network
d) None of these

(6) What is end-end encryption in Transport Layer

a) Only user who are communicating can read the message
b) End device are secured.
c) Other than the communicating party, others can read the message
d) None of these

(7) Which of the following is not a part of the characteristic of 4G network?
a) Multirate management
b) Fully converged services
c) Software dependency
d) Diverse user devices

(8) What is the access point (AP) in a wireless LAN?

a) device that allows wireless devices to connect to a wired network
b) wireless devices itself
c) Both of these
d) None of these

(9) Usually , VLR Contains a copy of data of _____?
A) HLR
B) EIR
C) AUC
D) none

(10) What is the full form of ARQ

a) Automated Response Query
b) Automatic Repeat Request
c) Automatic Response Request
d) None of these

Que.1 (B) Answer the following questions. **[10]**

(1) Mention the different entities in a mobile IP.

(2) Define GSM?Define GSM?

(3) Abbrevation of LTE

(4) What exactly Automatic Repeat Request (ARQ) is used for ?

(5) What is decapsulation?

(6) What do you mean by mobility binding?

(7) What is the primary goal of GSM?

(8) What exactly Space Division Multiplexing (SDM) does in cellular system?

(9) What is the abbrevation of GPRS

(10) Define a tunnel.

Que.2

(A) Explain Wireless Application Protocol Stack [8]

(B) What is Address Resolution Protocol (ARP) and Explain How ARP Spoofing works? [8]

OR

(B) Draw a neat diagram of GSM architecture and explain in detail. [8]

Que.3

(A) Discuss the importance Mobile IP and explain the working of Mobile IP. [8]

(B) Draw only Architecture of GPRS. [4]

(C) How Congestion can be detected using Slow Start Algorithm [4]

OR

(A) Explain OFDM block diagram and discuss how it can reduce the Interference. [8]

(B) Explain different propagation modes of Wireless communication? [4]

(C) Enlist and explain all the problems related for TCP with Mobility [4]

Que.4

(A) Explain below term in Cellular Network. [8]
1)Channel Allocation
2)Handoff
3)Improving coverage and capacity

(B) With a labelled diagram explain FHSS, DSSS and OFDM in 802.11 Layer description [8]

OR

(A) Explain Open Shortest Path First (OSPF) and Border Gateway Protocol (BGP). [8]

(B) Differentiate between Distance Sequence distance Vector (DSDV) and AODV Routing? [8]

Que.5

(A) Explain all classical enhancement to TCP for Mobility in a tabular form? [6]

(B) Explain Destination Sequence distance vector (DSDV) in brief? [6]

(C) Enlist and explain all the problems related for TCP with Mobility [4]

OR

(A) Explain the following Terminologies in Mobile IP [6]

Foreign Agent
Correspondent Node
Home Network

(B) Analyse some of the features and challenges of 4G. [6]

(C) Show the importance of GPRS [4]

Que.6

(A) Explain different types of toplogies with its neat diagram. [8]

(B) Explain the term "Authentication" in a brief manner. [4]

(C) Compare the 1st, 2nd, 3rd and 4th Generation system in a tabular form, Table includes (Technology (Write Specified Abbreviations), Data Rates, and Services. [4]

OR

(A) Explain GPRS Billing Process in detail [8]

(B) Explain TMSI and LMSI [4]

(C) Mention the disadvantages of GSM. [4]

---Best of Luck---

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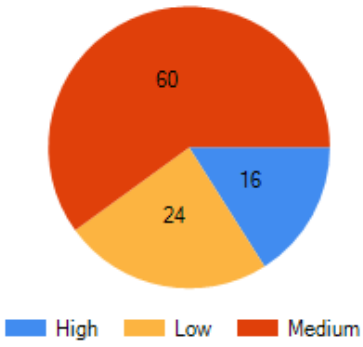
Difficulty Level	Weightage Recommended	Weightage Actual	No of Question	Total Marks	Question List
High	20	15.70	7	27	1(A), 1(B), 2(A), 2(B), 6(B), 6(C)
Low	20	24.42	18	42	1(A), 1(B), 2(B), 4(A), 6(A), 6(C)
Medium	60	59.88	20	103	1(A), 1(B), 3(A), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 5(C), 6(A), 6(B)

Module Name	Weightage Recommended	Weightage Actual	No of Question	Total Marks	Question List
Detailed Introduction of Mobile Computing	10	13.37	7	23	1(A), 1(B), 2(B), 3(B), 6(B), 6(C)
The cellular concept	10	11.05	5	19	1(A), 1(B), 4(A), 6(A)
Telecommunication System	25	20.35	9	35	1(A), 1(B), 2(B), 3(B), 5(C), 6(A), 6(B), 6(C)
Mobile IP:	10	10.47	6	18	1(B), 3(A), 5(A)
Mobile Transport Layer	10	12.21	7	21	1(A), 1(B), 3(C), 5(A), 5(C)
Wireless Application Protocol	10	4.65	1	8	2(A)
Mobile Ad Hoc wireless networks	15	13.95	5	24	1(A), 4(A), 4(B), 5(B)
Introduction to 4G:	10	13.95	5	24	1(A), 1(B), 3(A), 4(B), 5(B)

Blooms Taxonomy	Weightage Recommended	Weightage Actual	No of Question	Total Marks	Question List
Remember / Knowledge	10	5.23	9	9	1(A), 1(B)
Understand	20	72.67	30	125	1(A), 1(B), 2(A), 2(B), 3(B), 3(C), 4(A), 4(B), 5(A), 5(B), 5(C), 6(A), 6(B), 6(C)
Apply	25	0.00	0	0	
Analyze	25	22.09	6	38	3(A), 3(B), 4(B), 5(B), 5(C)
Evaluate	10	0.00	0	0	
Higher order Thinking	10	0.00	0	0	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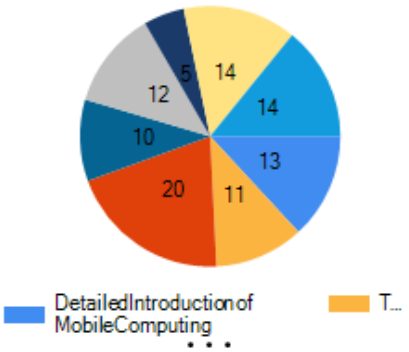
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DetailedIntroductionof MobileComputing
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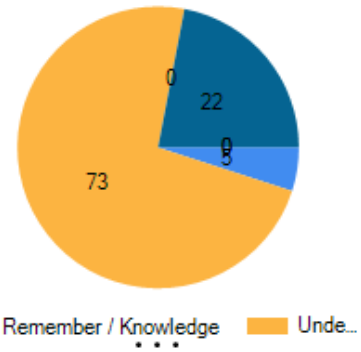
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Remember / Knowledge
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