AIN SHAMS UNIVERSITY
FACULTY OF COMPUTER AND INFORMATION SCIENCES

Software Engineering Program – Credit Hours Programs (CHP)

STUDENT PORTFOLIO – Academic Year 2023/2024

UEL Module Code CN5124	*UEL Module Name* AI for Safety Critical Systems	
ASU Course Code CIS243	*ASU Course Name* Artificial Intelligence	
	Semester Fall 2024	**Date of Submission** 12/5/2024

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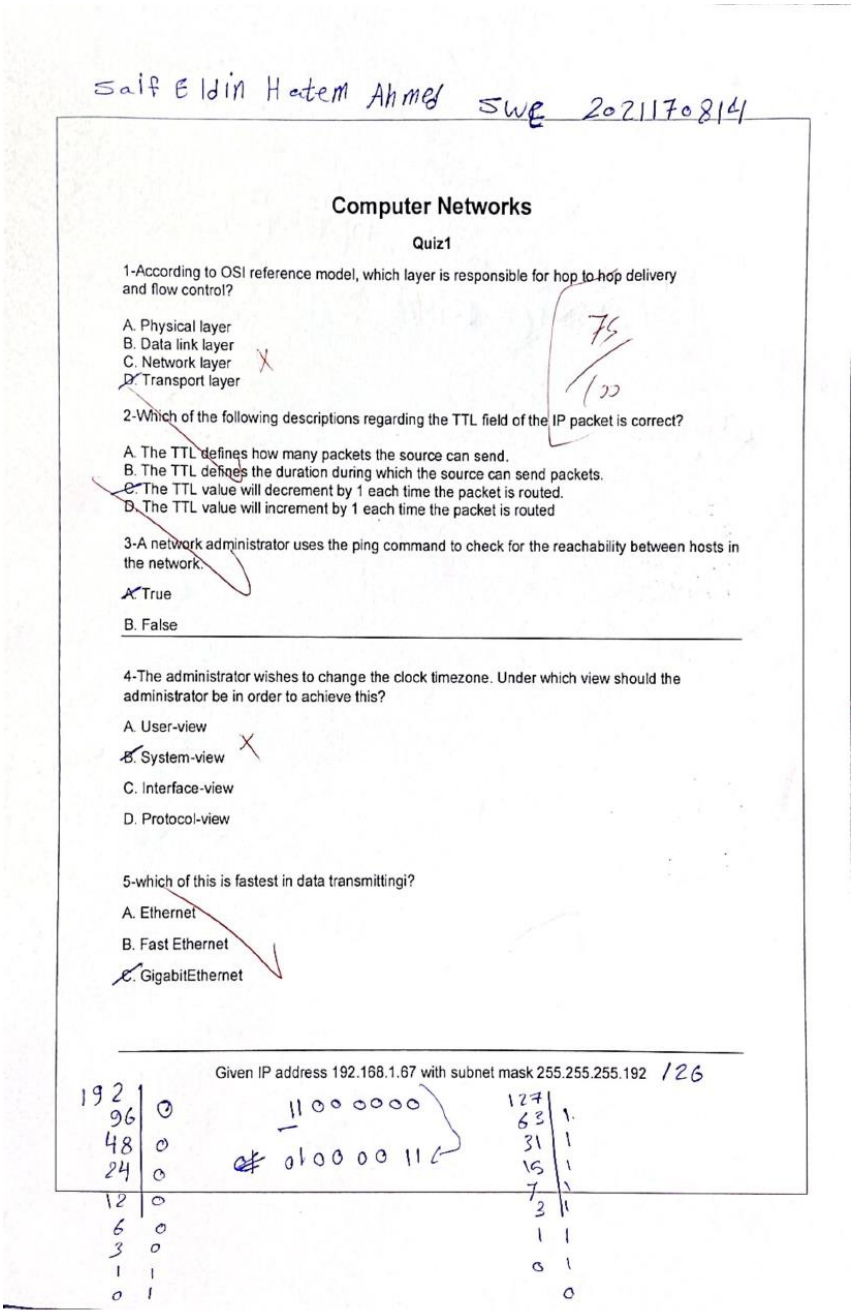
1- Quizzes



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Computer Networks

Quiz1

1-According to OSI reference model, which layer is responsible for hop to hop delivery and flow control?

A. Physical layer
B. Data link layer
C. Network layer X
D. Transport layer

75/100

2-Which of the following descriptions regarding the TTL field of the IP packet is correct?

A. The TTL defines how many packets the source can send.
B. The TTL defines the duration during which the source can send packets.
C. The TTL value will decrement by 1 each time the packet is routed.
D. The TTL value will increment by 1 each time the packet is routed

3-A network administrator uses the ping command to check for the reachability between hosts in the network.

A. True
B. False

4-The administrator wishes to change the clock timezone. Under which view should the administrator be in order to achieve this?

A. User-view
B. System-view X
C. Interface-view
D. Protocol-view

5-which of this is fastest in data transmittingi?

A. Ethernet
B. Fast Ethernet
C. GigabitEthernet

Given IP address 192.168.1.67 with subnet mask 255.255.255.192 /26

192 | 1
96 | 1
48 | 0
24 | 0
12 | 0
6 | 0
3 | 0
1 | 1
0 | 1

11000000
01000011

127 | 1
63 | 1
31 | 1
15 | 1
7 | 1
3 | 1
1 | 1
0 | 1
0

Scanned with CamScanner

1. Determine which class this address belongs to. class C
2. What is the subnet address for this ip address. 192.168.1.64
3. What are the first and last ip addresses for this subnet?

First: 192.168.1.65

Last: 192.168.1.127 -5

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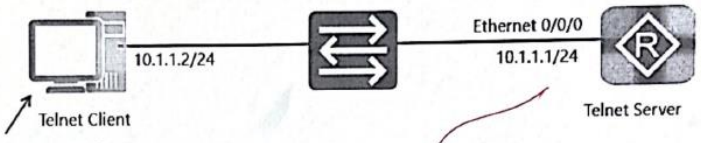
Computer Networks

Quiz2

Version 5

1-In order for the client to be connected to the server ,which command should be written



- Telnet 10.1.1.1
- Telnet server 10.1.1.1
- Telnet Ethernet 0/0/0
- Telnet 10.1.1.2

100

2-Packets are forwarded to destinations based on the

- MAC table
- Routing table
- IP table
- Arp-cache

3- What is the preference for the RIP routing protocol

- 10
- 20
- 60
- 100

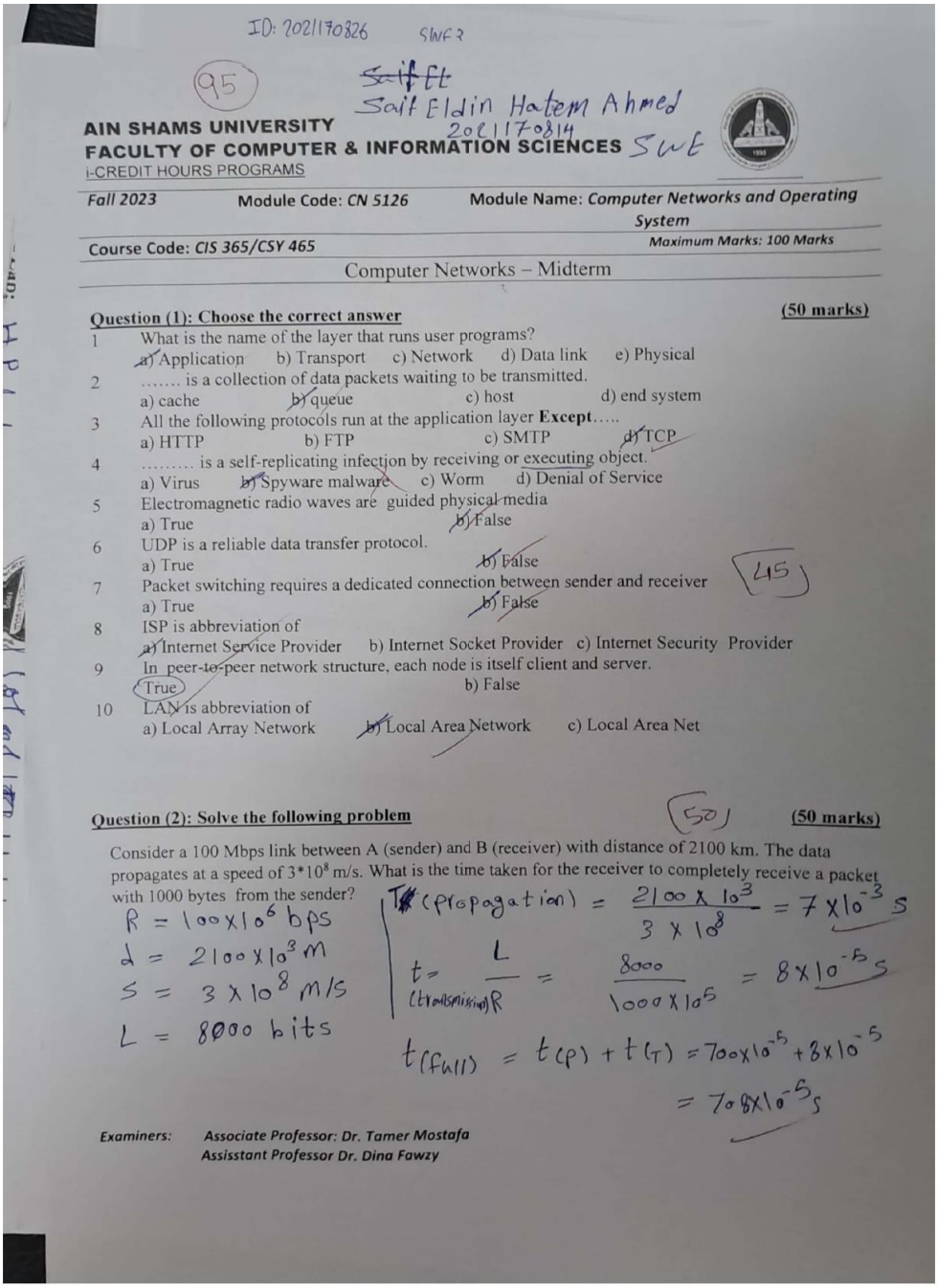
4- In static route load balancing the preference of the two routes are different

- True
- False

5-How many messages are required for the termination of TCP connection?

- 1
- 2
- 3
- 4

2- Midterm Exam



ID: 2021170826 SWE 2

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AIN SHAMS UNIVERSITY
FACULTY OF COMPUTER & INFORMATION SCIENCES
i-CREDIT HOURS PROGRAMS

Fall 2023 Module Code: *CN 5126* Module Name: *Computer Networks and Operating System*

Course Code: *CIS 365/CSY 465* *Maximum Marks: 100 Marks*

Computer Networks – Midterm

Question (1): Choose the correct answer **(50 marks)**

1 What is the name of the layer that runs user programs?
a) Application b) Transport c) Network d) Data link e) Physical

2 ..... is a collection of data packets waiting to be transmitted.
a) cache b) queue c) host d) end system

3 All the following protocols run at the application layer **Except**.....
a) HTTP b) FTP c) SMTP d) TCP

4 ..... is a self-replicating infection by receiving or executing object.
a) Virus b) Spyware malware c) Worm d) Denial of Service

5 Electromagnetic radio waves are guided physical media
a) True b) False

6 UDP is a reliable data transfer protocol.
a) True b) False

7 Packet switching requires a dedicated connection between sender and receiver
a) True b) False

45

8 ISP is abbreviation of
a) Internet Service Provider b) Internet Socket Provider c) Internet Security Provider

9 In peer-to-peer network structure, each node is itself client and server.
True b) False

10 LAN is abbreviation of
a) Local Array Network b) Local Area Network c) Local Area Net

Question (2): Solve the following problem **(50 marks)**

50

Consider a 100 Mbps link between A (sender) and B (receiver) with distance of 2100 km. The data propagates at a speed of $3*10^8$ m/s. What is the time taken for the receiver to completely receive a packet with 1000 bytes from the sender?

$R = 100 \times 10^6$ bps
$d = 2100 \times 10^3$ m
$S = 3 \times 10^8$ m/s
$L = 8000$ bits

$T_{(propagation)} = \frac{2100 \times 10^3}{3 \times 10^8} = 7 \times 10^{-3}$ s

$t_{(transmission)} = \frac{L}{R} = \frac{8000}{1000 \times 10^5} = 8 \times 10^{-5}$ s

$t_{(full)} = t_{(P)} + t_{(T)} = 700 \times 10^{-5} + 8 \times 10^{-5}$
$= 708 \times 10^{-5}$ s

Examiners: *Associate Professor: Dr. Tamer Mostafa*
Assisstant Professor Dr. Dina Fawzy

CamScanner

3- Practical

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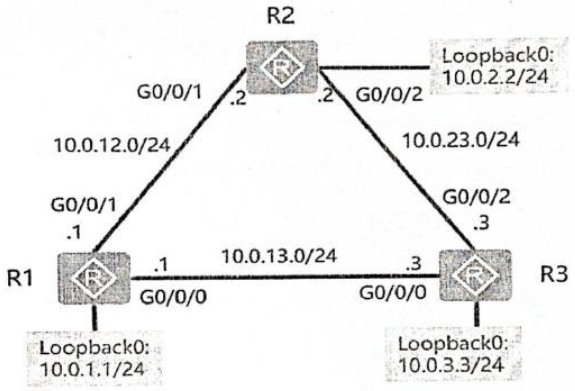
Question 8 100

You are required to implement the following tasks:



1- Configure the device names. 10 marks
2- Perform basic system & IP address configuration. 20 marks & 15 marks for loopback interfaces.
3- Display a brief for R1 interfaces to check the configuration. 15 marks
4- Configure a static route from R3 to network:"10.0.12.0". 25 marks
5- Display the routing table for Router 3. 15 marks