



UNIVERSITY COLLEGE TATI (UC TATI)

FINAL EXAMINATION QUESTION BOOKLET

COURSE CODE	: FCT 1043
COURSE	: FUNDAMENTALS OF NETWORKING
SEMESTER/SESSION	: 3-2024/2025
DURATION	: 3 HOURS

Instructions:







1. This booklet contains 5 questions. Answer **ALL** questions.
2. All answers should be written in answer booklet.
3. Write legibly and draw sketches wherever required.
4. If in doubt, raise your hands and ask the invigilator.

**DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO**  
**THIS BOOKLET CONTAINS 4 PRINTED PAGES INCLUDING COVER PAGE**

**QUESTION 1**

- a) What is a definition of computer network. (2 marks)
- b) Based on Table 1, Identify the following device and transmission media (6 marks)

*Table 1: Network Devices and Media*

i.		
ii.		
iii.		
iv.		
v.		
vi.		

- c) List **FIVE (5)** of network types. (5 marks)
- d) Give **THREE (3)** examples of PANs technologies. (3 marks)
- e) List **FOUR (4)** ICMPv4 Destination Unreachable codes and describe what each code indicates. (4 marks)

**QUESTION 2**

- a) Differentiate **TWO (2)** features Peer-to-Peer networks with Client Server networks. (4 marks)
- b) Describe about ICMP protocols. (2 marks)
- c) List **THREE (3)** ICMP messages. (3 marks)
- d) Determine the network address, broadcast address, number of host bits and number of hosts on Table 2 in page 3. (14 marks)

Table 2: Network Address

IPv4 Address/Prefix	Network Address	Broadcast Address	Total Number of Host Bits	Total Number of Hosts
192.168.100.25/28	i.	ii.	iii.	iv.
172.30.10.130/30	v.	vi.	vii.	viii.
10.1.113.75/19	ix.	x.	xi.	<b>8190</b>
198.133.219.250/24	xii.	Xiii.	xiv.	<b>254</b>

**QUESTION 3**

- a) Explain the following firewall.
  - i. Packet filtering. (2 marks)
  - ii. Application filtering (2 marks)
  - iii. URL filtering (2 marks)
- b) Recognize **THREE (3)** network devices need to protect. (3 marks)
- c) Briefly explain the fundamental update and patch in windows. (4 marks)
- d) Explain about vulnerability with their examples. (3 marks)
- e) List **THREE (3)** ways how intruders can gain access to networks. (3 marks)
- f) Identify **FOUR (4)** types of threats may arise after intruders gains access to network. (4 marks)

**QUESTION 4**

- a) List **FOUR (4)** of physical threats. (4 marks)
- b) State issues arise in environmental threats. (2 marks)
- c) Give full name of "Malware". (1 mark)
- d) Explain the following malware.
  - i. Viruses (3 marks)
  - ii. Worms (3 marks)
  - iii. Trojan Horses (3 marks)
- e) Give **ONE (1)** technique of how trojan horse spread. (2 marks)
- f) Classify **THREE (3)** categories of network attacks. (3 marks)

**QUESTION 5**

- a) State **FOUR (4)** new networking trends. (4 marks)
- b) Explain about bring your own devices (BYOD) with their examples. (4 marks)
- c) What is benefits of using cloud? (2 marks)
- d) List **THREE (3)** types of clouds. (3 marks)

..... End of Question.....