

**UNIVERSITY COLLEGE TATI (UC TATI)****FINAL EXAMINATION QUESTION BOOKLET**

COURSE CODE	: DCT 3113
COURSE	: MOBILE TECHNOLOGY
SEMESTER/SESSION	: 1 – 2023/2024
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 5 PRINTED PAGES INCLUDING COVER PAGE**

MOBILE TECHNOLOGY (DCT 3113)

QUESTION 1

- a) State **ONE (1)** difference between the first generation and second-generation of cell phones. (2 marks)
- b) List **FIVE (5)** advantages of 3G network. (5 marks)

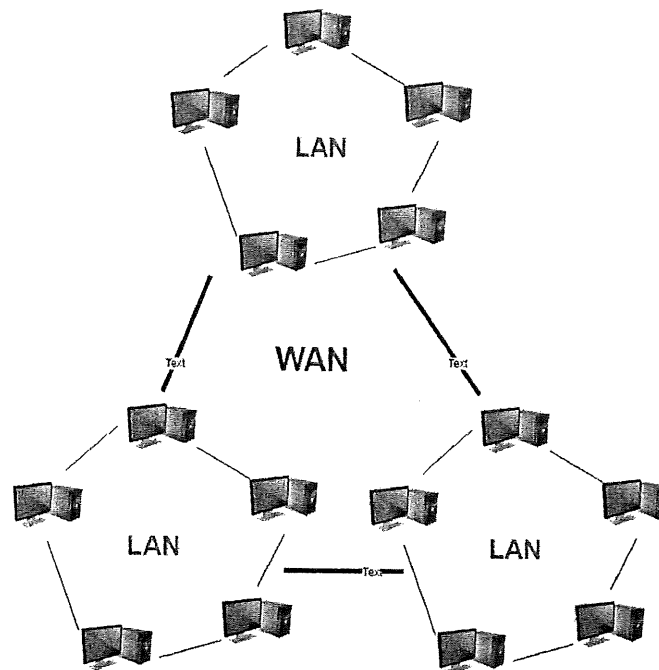


Figure 1: Wide Area Network.

- c) Refer to Figure 1, give **THREE (3)** disadvantages of WAN network. (3 marks)
- d) Identify **FOUR (4)** types of wireless network. (4 marks)

QUESTION 2

- a) Explain **FOUR (4)** requirements of Mobile IP. (8 marks)
- b) Identify **THREE (3)** components of Mobile IP. (6 marks)

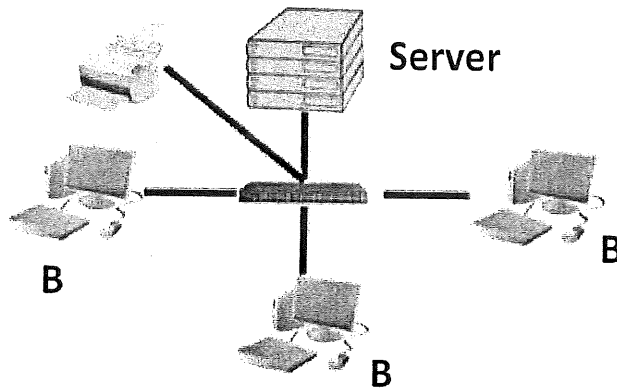


Figure 2: Client-server architecture.

- c) Based on Figure 2, discuss the process of B. (4 marks)
- d) Describe **THREE (3)** components of client server architecture. (6 marks)
- e) Explain **TWO (2)** examples of client server architecture. (4 marks)

QUESTION 3

- a) Graphics are an element that virtually all multimedia applications. Give **FOUR (4)** an example of graphics. (4 marks)
- b) Give **TWO (2)** differences between vector and bitmap. (4 marks)
- c) Following are the various of graphic file formats.

Table 1: Graphic File Formats

	FILE FORMAT	STAND FOR
i)	PNG (.png)	Portable Network Graphics
ii)	GIF (.gif)	a) _____
iii)	b) _____	Tagged Image File Format
iv)	JPEG (.jpg)	c) _____

MOBILE TECHNOLOGY (DCT 3113)

- i) Identify the answers of **a), b) and c)**. (3 marks)
 - ii) Classify **TWO (2)** pros of **b)** file format. (2 marks)
 - iii) Refer to **a)**, does it support animation format. Give your opinion. (2 marks)
- d) Compare **TWO (2)** differences between low resolution and high resolution based on the Figure 3 based on **image quality and file size**. (4 marks)

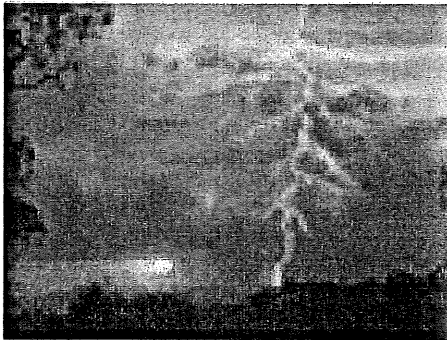


Figure 3(a): Low resolution.



Figure 3(b): High resolution

- e) Ali wants to create web animation. The images should hold all the animation frames and timing information in one single file.
- i) Identify **ONE (1)** suitable format Ali should use in web animation. (1 mark)
 - ii) State **TWO (2)** reasons based on (i). (2 marks)

MOBILE TECHNOLOGY (DCT 3113)

QUESTION 4

- a) List **THREE (3)** the most popular of computer programming languages. (3 marks)
- b) Explain **FOUR (4)** examples of databases with open-source code. (8 marks)
- c) Give **THREE (3)** benefits of learning a programming language. (3 marks)

QUESTION 5

- a) Describe **TWO (2)** different kinds of mobility in computing. (4 marks)
- b) List **SIX (6)** applications of mobile computing in industry 4.0. (6 marks)
- c) Discover **THREE (3)** advantages of middleware in distributed systems. (6 marks)
- d) State **SIX (6)** examples of software applications. (6 marks)

-----END OF QUESTIONS-----

