

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

COURSE CODE	: DCT 3113
COURSE	: MOBILE TECHNOLOGY
SEMESTER/SESSION	: 1-2022/2023
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 3 PRINTED PAGES INCLUDING COVER PAGE

QUESTION 1 (20 marks)

- a) Describe **THREE (3)** special problem in wireless and mobile technology? (3 marks)
- b) While connecting to the public WIFI, explain **THREE (3)** strategies to secure the connection. (6 marks)
- c) Explain **SIX (6)** features in 3G technology. (6 marks)
- d) In early 1960s, analog technology was invented, named as Advanced Mobile Phone System (AMPS). Name **TWO (2)** phones and give **ONE (1)** service offered in AMPS. (3 marks)
- e) In wireless network, what kind of signal used for sharing files or using Internet? (2 mark)

QUESTION 2 (20 marks)

- a) Illustrate the diagram and all components for Wireless Local Loop (WLL) architecture with the explanation. (8 marks)
- b) Explain the process when a customer subscribes WLL services. (8 marks)
- c) Why WAP Gateway is needed in extending mobile client-server model? (4 marks)

QUESTION 3 (20 marks)

- a) Illustrate and explain the diagram for extending model mobile client-server with all the components. (14 marks)
- b) Name **THREE (3)** properties for *Button* and **THREE (3)** properties for *Image* in MIT Inventor. (6 marks)

ANSWER:

Button: Height, Width, Shape

Image: Visible, RotationAngle, Height, Width

QUESTION 4 (20 marks)

- a) List **THREE (3)** sensors in MIT Palette. (3 marks)
- b) Design **TWO (2)** screens that have these components in each screen.
- (i) First Screen (4.5 marks)
Label – named to UC TATI
Button – named to 'Click to see my logo'
- (ii) Second Screen – named Screen to 'uctati' (4.5 marks)
Image of UCTATI logo (*considered you already upload uctati.jpg here*)
- c) Then, from Question 4 b): write the block to connect when user click Button in Screen 1, the Screen 2 will appear to display UC TATI logo. (4 marks)
- d) MIT App Inventor are free software for creating mobile apps. What are the needed requirements for new user to use it? (4 marks)

QUESTION 5 (20 marks)

- a) In education sectors, the teachers can use the advantages of mobile computing in teaching session.
- (i) Prepare **THREE (3)** possible interactive mobile computing applications available for the teachers to be used during teaching session. (6 marks)
- (ii) Carry out **TWO (2)** weaknesses of mobile computing in teaching session with briefly explanation. (4 marks)
- b) Explain the **FIVE (5)** challenges of mobile computing to senior citizen. (10 marks)

-----End of question-----

