UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER I
SESSION 2021/2022

COURSE NAME	:	MOBILE COMPUTING
COURSE CODE	:	DAT 20503
PROGRAMME CODE	:	DAT
EXAMINATION DATE	:	JANUARY / FEBRUARY 2022
DURATION	:	2 HOURS 30 MINUTES
INSTRUCTION	:	1. ANSWERS **ALL** QUESTIONS.
		2. THIS FINAL EXAMINATION IS A **ONLINE** ASSESSMENT AND CONDUCTED VIA **CLOSE BOOK**.

THIS QUESTION PAPER CONSISTS OF **SIX (6)** PAGES

TERBUKA

SECTION A

Fill in the blanks.

Q1   Global System for Mobile Communication (GSM) is based on the _____.

(1 mark)

Q2   _____ is a type of mobility when the computing technology moves along with the users.

(1 mark)

Q3   The _____ can deliver data rate up to 54 *Mbit/sec*.

(1 mark)

Q4   _____ is to transmit and receive radio frequency signals with devices able to receive transmitted signals.

(1 mark)

Q5   _____ handle communications with different terminal types and sends it for processing and send details to the user's terminal.

(1 mark)

Q6   _____ is about moving from one network to another network and uses the same service.

(1 mark)

Q7   _____ refers to any of several protocols used in second-generation (2G) and third generation (3G) wireless communications.

(1 mark)

Q8   Reducing the size of hardware to be used in the mobile technology is for ensuring the devices _____.

(1 mark)

Q9   _____ is not suitable to transfer large files due to its low connectivity.

(1 mark)

Q10   _____ is when the user can move from one city to another and still uses the mobile technology in similar way.

(1 mark)

SECTION B

Identify whether each of the following statements is TRUE or FALSE.

Q11   Mobile devices can be used as in private network under Mobile VPN.

(1 mark)

Q12   Authorization in information security is to ensure message integrity.

(1 mark)

Q13   GSM is based on the code-division multiple access (CDMA).

(1 mark)

Q14   One of the benefits of GPRS is easy billing.

(1 mark)

Q15   Transport layer is to establish end to end connection.

(1 mark)

Q16   One of the advantages of Mobile Commerce is that the technology to set up an m-commerce business is very expensive.

(1 mark)

Q17   Vehicular ad hoc networks (VANETs) enable effective communication with another vehicle or helps to communicate with roadside equipment.

(1 mark)

Q18   Internet-Based Mobile Ad hoc Networks (iMANET) helps to link non- fixed nodes.

(1 mark)

Q19   Example of statis assets attacks such as theft of credit card number.

(1 mark)

Q20   One of the component in information security is confidentiality.

(1 mark)

SECTION C

Q21　(a)　Distinguish between 4G and 5G.

(4 marks)

(b)　Explain Time Division Multiple Access (TDMA) with an example.

(3 marks)

(c)　Discuss the differences between TDMA and CDMA.

(4 marks)

(d)　Sketch on how the base subsystem and network subsystem are placed in mobile network.

(7 marks)

(e)　List FOUR (4) functions covers by Operation Support Subsystem (OSS).

(4 marks)

(f)　Discuss FOUR (4) differences between WLAN and WIFI.

(8 marks)

Q22　(a)　List all the network layers in mobile.

(5 marks)

(b)　Explain is the difference between network layer, data link layer and application layer in mobile?

(6 marks)

(c)　In your opinion, is mobile Internet Protocol are heterogeneous mobility on the global Internet? Discuss with reason.

(3 marks)

(d)　Discuss on the requirements for mobile IP becomes standard in network.

(12 marks)

(e)　Name TWO (2) software platform you are familiarized with in mobile environment.

(2 marks)

(f)   Choose ONE (1) of the software platforms you have listed in (e) in terms of its operating system and language used in development.

(2 marks)

Q23   (a)   Define the code using array for a program with the following rules:
(i)   when a button is pressed
(ii)   long press to delete an item

(15 marks)

(b)   Based on your understanding in using Android Developer tool, describe the way to write an application based on the given idea in **Figure Q23(b)**.

(i)   The application will open a new activity and reverse once user clicks a button as the interface shown in **Figure Q23(b)**.
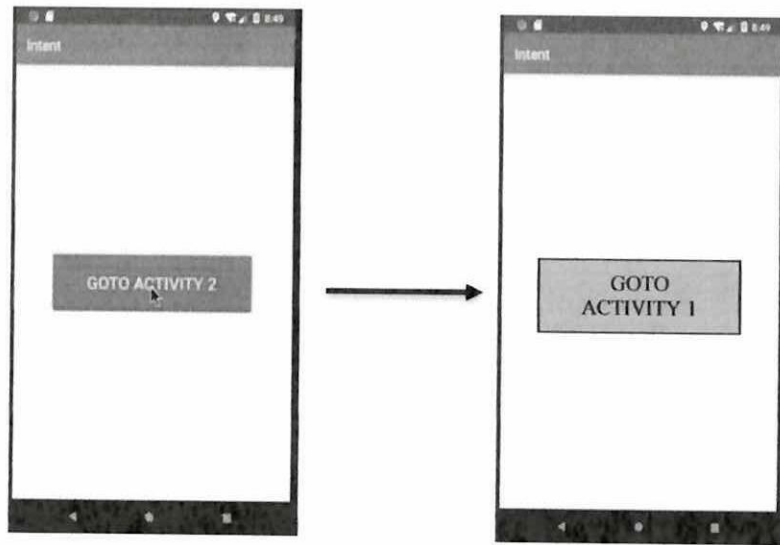
(5 marks)

-END OF QUESTIONS –

FINAL EXAMINATION

Figure Q23(b)

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