



UNIVERSITY COLLEGE TATI (UC TATI)

FINAL EXAMINATION QUESTION BOOKLET

COURSE CODE : DNT 3053

COURSE : WIRELESS NETWORK

SEMESTER/SESSION : 2 – 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 4 PRINTED PAGES INCLUDING COVER PAGE

WIRELESS NETWORK (DNT 3053)

QUESTION 1

- a) State **FOUR (4)** benefits of wireless network. (4 marks)
- b) Define **FOUR (4)** Internet Service Providers (ISP) in Malaysia. (4 marks)
- c) Explain **TWO (2)** types of wireless technology. (4 marks)
- d) Illustrate **TWO (2)** examples of wireless devices. (4 marks)

QUESTION 2

- a) List **FOUR (4)** limitations of wireless network. (4 marks)
- b) Define **FOUR (4)** examples of personal devices that can function wirelessly. (4 marks)
- c) Compare **THREE (3)** types of wireless standard. (6 marks)
- d) Explain term **Confidentiality, Integrity, and Authentication (CIA)** in security features of wireless network. (6 marks)

QUESTION 3

- a) State **THREE (3)** types of modulation techniques of frequency. (3 marks)
- b) List **FIVE (5)** radio frequency phenomena issues that can affect WLAN radio waves. (5 marks)
- c) Explain **THREE (3)** types of multiple access technology. (6 marks)
- d) Explain **TWO (2)** types of wireless antennas. (4 marks)

QUESTION 4

- a) Define **FOUR (4)** wireless technologies that implement an Orthogonal Frequency Division Multiplexing (OFDM) modulation technique. (4 marks)
- b) Compare Ad-hoc and Infrastructure Mode of WLAN installations. (4 marks)

- c) Identify the comparison between 802.11a and 802.11b standards in Table 1 below.

(8 marks)

Table 1: Comparison of 802.11a and 802.11b

802.11a vs. 802.11b	802.11a	802.11b
Raw data rates		
Range		
Bandwidth		
Modulation		

- d) Explain **TWO (2)** benefits of 802.11g standard in wireless technology.

(4 marks)

QUESTION 5

- a) Explain the functions of the following wireless devices:

i. Bridge

(2 marks)

ii. Access Point

(2 marks)

iii. Antenna

(2 marks)

- b) Describe most secure password uses for security in wireless with their characters.

(3 marks)

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- c) Explain **TWO (2)** benefits of security implementation in wireless LAN and identify the weakest security protocol. (5 marks)
- d) Illustrate the relationship between sending station and receiving station and describe **TWO (2)** examples of an application that applies the same technique. (7 marks)
- e) Illustrate **FIVE (5)** network topologies. (5 marks)

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