



NATIONAL OPEN UNIVERSITY OF NIGERIA
14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS
SCHOOL OF SCIENCE AND TECHNOLOGY
JUNE/JULY EXAMINATION

COURSE CODE: CIT758

COURSE TITLE: WIRELESS COMMUNICATION II

TIME ALLOWED: 3 HOURS

INSTRUCTION: Answer any five questions out of Seven

1(a) Discuss the concept of Wireless Communication, and enumerate ten wireless equipment in use today.

(b) Explain the term Cellular Network and how it interrelates with Wireless Communication.

(c) Under which of the generations of cellular wireless network is the Mobile Computing? Explain.

2 (a) Using appropriate diagram, explain the phenomenon "Line of Sight", stating at least one common example of this phenomenon.

(b) Outline and explain the three (3) effects of electromagnetic wave propagation through the free space.

(c) Enumerate and explain the three propagation mechanisms used in mobile radio propagation.

3 (a) What is Modulation. State at least three types of modulation technique.

(b) Briefly explain the concept of diversity; enumerating at least three important roles it plays in telecommunication.

(c) Differentiate among these four multiple access techniques; FDMA, TDMA, CDMA and SDMA, clearly stating the advantage(s) of one over another.

4 (a) Give the meaning of the acronym GSM.

(b) Outline and discuss the various generations involved in cellular wireless network.

(c) Enumerate and discuss at least five significant challenges of RFID.

5 (a) What is a Satellite. Explain its principle of operation, stating at least five reasons why it is the most effective mode of communication.

(b) Outline and explain five essential factors considered in satellite communication, indicating the various services it is used for.

(c) Enumerate and discuss any three types of satellite orbit, stating at least two advantages and disadvantages each.

6 (a) Explain the IEEE 802.11 standard for WLAN implementation, indicating its various versions.

(b) Using a suitable diagram, explain when a BSS Basic Service Set, becomes an infrastructure.

(c) Using the IEEE 802.11 standard, explain the first two layers of the OSI Model.

7 (a) Define the term Bluetooth Profile, enumerating at least ten profiles adopted by Bluetooth SIG.

(b) Outline and discuss any five Bluetooth Specifications.

(c) Discuss the operating principle of RFID, enumerating the various types of Readers and Tags.