



NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
MARCH/APRIL 2016 EXAMINATION

SCHOOL OF SCIENCE AND TECHNOLOGY

COURSE CODE: CIT758
COURSE TITLE: WIRELESS COMMUNICATION II

Time: 2½ hours **Course Credit Unit:** 3

Instruction: Answer any five questions each question carries 14 marks

1a) List any five frequency bands used by satellites stating their respective operating frequency range. (5 marks)

b) Write short notes on any three of the frequency bands listed in (a) above (9 marks)

2) State and discuss the various ways capacity allocation can be achieved in satellite communication (14 marks)

3a) With the aid of illustrative diagram, briefly discuss the IEEE 802.11 architecture (5 marks)

b) In the context of IEEE 802.11, what is a station?) 2 marks

c) Differentiate between a mobile station and a portable station) 2 marks

d) Briefly describe Golay forward error correction stating any two of its practical application areas)5 marks

4a) In the context of IEEE 802.11 LAN, describe the following:

(i) BSS(2 marks) (ii) IBSS (2 marks) (iii) Portal (2 marks)

b) Briefly describe any four of the distribution services of the IEEE 802.11 standard (8 marks)

5a) State main five advantages and three disadvantages of satellite communications (4 marks)

b) Mention and briefly explain any four application areas of satellite communication (10 marks)

6a) What is Bluetooth?) 2 marks

b) Write short note on the term "Bluetooth Profile" (2½ marks)

c) Briefly describe any five of the following profiles defined and adopted by the Bluetooth SIG. (7½ marks)

(i) Basic Printing Profile (BPP)

(ii) Cordless Telephony Profile (CTP)

(iii) Video Distribution Profile (VDP)
PBA)

(iv) Phone Book Access Profile (PBAP,

(v) Intercom Profile (ICP)

(vi) Device ID Profile (DIP)

(vii) Dial-up Networking Profile (DUN)

d) List the sections that Services are divided into in IEEE 802.11) **2 marks**

7a) What do you understand by Diversity? **(2 marks)**

(b) List and briefly describe the ways in which FDMA can be performed in satellite communications.) **4 marks**

(c) Name and describe the following classes of diversity **(8 marks)**

(i) Time diversity: *(2 marks)*

(ii) Angle diversity: *(2 marks)*

(iii) Co-operative diversity: *(2 marks)*

(iv) Space diversity: *(2 marks)*