# NATIONAL OPEN UNIVERSITY OF NIGERIA
## 14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
## SEPTEMBER/OCTOBER 2015 EXAMINATION

## SCHOOL OF SCIENCE AND TECHNOLOGY

**COURSE CODE: CIT 758**

**COURSE TITLE:WIRELESS COMMUNICATION II**

**Time:** 2½ hours

**Instruction**: *Answer any five questions each question carries 14 marks*

1.  (a) What do you understand by Diversity?*(4 marks)*
(b) Name and describe any four classes of diversity*(10 marks)*

2.  (a)    State and describes the components parts of a Cellular System*(8 marks)*
    (b) Name and describe any three challenges of RFID*(6 marks)*

3.  (a)    What do you understand by "Error Detection Code"?*(2marks)*
    (b)    Write short notes on any four types of error detection. *(12marks)*

4.  (a)    Define Modulation*(2 marks)*
    (b)    State, with example in each case, the aim of the following types of modulation
      i)    Analog modulation        *(1½ marks)*
      ii)   BandPass Digital modulation*(1½ marks)*
      iii)  Line coding modulation  *(1½ marks)*
      iv)   Pulse shaping modulation      *(1½ marks)*
    (c)    What is Multiple Access?        *(2 marks)*
    (d)   State four examples of Wireless Communication gadgets *(4 marks)*

5.  Write short notes on the following stating their advantages and disadvantages
      (a)    Geostationary orbits (GEO)    *(3 marks)*
      (b)    Low-Earth-orbiting satellites    *(4½ marks)*
      (c)    Medium Earth Orbit (MEO)    *(4½ marks)*

6.  (a)    What is Error Control?        *(2 marks)*
    (b)    Write briefly on the following:
      (i)    Backward Error Control    *(6 marks)*
      (ii)   Forward Error Control    *(6 marks)*

7.  (a) Briefly describe the following
      i)Spread spectrum multiple access (SSMA)        *(5 marks)*
      ii)  Space Division Multiple Access (SDMA)    *(6 marks)*
    (b)    State the advantages of TDMA over FDMA.    *(3 marks)*