NATIONAL OPEN UNIVERSITY OF NIGERIA

14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS

SEPTEMBER/OCTOBER 2015 EXAMINATION

SCHOOL OF SCIENCE AND TECHNOLOGY

COURSE CODE: **CIT305**

COURSE TITLE: **NETWORKING AND COMMUNICATION TECHNOLOGY**

TIME: 3 HOURS
INSTRUCTIONS: ANSWER ANY FIVE QUESTIONS OUT OF SEVEN

1 .
   a.   Write down **four** reasons why computers are netw orked.
   b. B riefly explain what a **Virtual Private Network** is.

2 .

   a.   Write short n otes on the following types of physical media:
        i. Twis ed pair cable
        ii. Coaxial cable
        iii. Fibre-optic cable
   b. D istinguish between **Ethe rnet** and **Gigabit Ethern et**.

3 .
   a. D escribe the **Data Link** layer of the OSI Reference model.
   b.   Write a brief note on the **IEEE802.11 b** standard popularly kno wn as **Wi-Fi**, listing the
       two challenges it must ov ercome in
       comparison   with wired n etworks.

4 .
   a. B riefly describe what **TCP** is, explaini ng why it is considered a reliable protocol.
   b. E xplain the addressing an d other fun ctions of the **Internet Pr otocol** (IP) in the IPv4
       I nternet suit.

5 .
   a. B riefly describe **four** threats facing an **enterprise network** co nnected to the Internet.
   b. D istinguish between a LAN and a
   WAN.

6 .

   a. B riefly describe the follo wing as appl ed to Netw   rk planning and design:
        i. Busin ess require ments
        ii. Proof of concept.
   b. G ive a brief d escription of the following:

    i. Modem
   ii. Multiplexer

7.

       D escribe **fou r** types of **no ise,** indicati ng which typ e is particul arly
a. harmful to digital da ta.
       G ive a brief d escription of the **ISDN** t echnique hig hlighting its main
b. advantage over
       o ther comm nication tec hniques.