COURSE CODE: CIT 303
COURSE TITLE: PRINCIPLES OF COMMUNICATION TECHNOLOGY
TIME: 2 HOURS 30 MINUTES
CREDIT: 3 UNITS
INSTRUCTION: ATTEMPT 5 QUESTIONS. QUESTION1 IS COMPULSORY AND ANY OTHER FOUR (4) QUESTIONS

1(a) State three forms data can be for processing into information (6 **Marks**)
1(b) State five functions perform by the physical layer (**5marks**)
1(c) With respect to the course, what are the three types of signals? (6 marks)
1 (d) List five address classes in IPV4 Addressing System (5 marks)

2a) Explain any two examples of Common System (6 marks)

2b) Discuss the concept of Signal Sampling *(6marks)*

3(a) Describe any three networking methods (6 marks)
3b) Differentiate between the following hardware devices:
   (i) Gateway and Protocol Converter *(3 marks)*
   (ii) Multilayer switch and Digital Media Receiver *(3 marks)*

4a) Describe the three software for Network Connection (6 marks)
4b) Discuss the following Network Topologies:

   (i)   Ring (2 marks)

   (ii)   Tree (2 marks)

   (iii)   Mesh (2 marks)

5a) Discuss the three causes of impairment in signal transmission? *(6 marks)*
5b) Discuss three functions of Network Operating System

6a) What are the three stages or algorithm for designing switches? *(6 marks)*
6b) Describe the three types of keys in cryptography *(3 marks)*
6c) Mention three characteristics of block cipher mode (**3marks**)