



**NATIONAL OPEN UNIVERSITY OF NIGERIA,  
PLOT 91, CADASTRAL ZONE, UNIVERSITY VILLAGE, JABI – ABUJA  
FACULTY OF SCIENCES<sup>45678</sup>**

**COURSE CODE: CIT 303**

**SECOND SEMESTER EXAMINATION 2021\_2**

**COURSE TITLE: PRINCIPLES OF COMMUNICATION TECHNOLOGY**

**TIME: 2 HOURS 30 MINUTES**

**CREDIT: 3 UNITS**

**INSTRUCTION: ATTEMPT 5 QUESTIONS. QUESTION 1 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**)