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**JOMO KENYATTA UNIVERSITY**

**OF**

**AGRICULTURE AND TECHNOLOGY**

**NAKURU CAMPUS**

**University Examinations 2019**

**YEAR 2 SEMESTER 2**

**CONTINUOUS ASSESSMENT TEST TWO [CAT 2] - FOR DIPLOMA IN BUSINESS & INFORMATION TECHNOLOGY (DBIT)**

**HCT 0204 DATA COMMUNICATION AND NETWORKS**

**Date: October 2019 Time: 1 hour**

**INSTRUCTIONS: Answer ALL the questions provided in this paper**

1. Differentiate between: (2marks)

(i) Serial and parallel data transmission

(ii) Client server and peer-to-peer network configuration

1. Explain the importance of carrier signal modulation (2marks)
2. Use diagrams to differentiate the following analogue and digital modulation techniques(6marks)
3. Phase modulation and Phase Shift Key
4. Amplitude modulation and Amplitude Shift Key
5. Frequency modulation and Frequency Shift Key
6. Explain the following information coding methods (8marks)
7. Data compression (or, source coding)
8. Error control (or channel coding)
9. Cryptographic coding
10. Line coding
11. State the purpose of protocols in communication systems. Give two examples (2marks)
12. Give three types of bounded transmission media and their relevant connectors (3marks)
13. Differentiate between CSMA/CD and CSMA/CA as used in collision control (2marks)