MAASAI MARA UNIVERSITY

UNIVERSITY EXAMINATIONS 2017/2018 (REGULAR)

SCHOOL OF SCIENCE AND INFORMATION SCIENCES

UNIVERSITY EXAMINATIONS FOR THE DEGREE OF BACHELOR

OF COMPUTER SCIENCE

SECOND YEAR SECOND SEMESTER EXAMINATIONS

COURSE CODE: COM 2205
COURSE TITLE: DATA COMMUICATION AND NETWORKING

DATE: 23RD APRIL 2018   **TIME: 1100 – 1300HRS**

INSTRUCTIONS
- Answer Question ONE and any other TWO

QUESTION ONE

a. Discuss differences between the following types of networks
    (i) Peer-to-peer networks and Client/server networks   **[6 marks]**
    (ii)   LAN (Local Area Network) and wide area network   **[6 marks]**
    (iii) Star Topology and bus topology   **[6 marks]**

    (iv) Public Switched Telephone Network (PSTN) and Integrated

      Services Digital Network (ISDN)   **[6 Marks]**

b. Define the following terms as used in networking
    (i) Workstation   **[1 Mark]**
    (ii)   Server   **[1 Mark]**
c. Describe DHCP request process   **[4 Marks]**

QUESTION TWO
a. Discuss the following communication Switching Techniques
    (i) Circuit Switching   **[4 Marks]**
    (ii)   Massage Switching   **[4 Marks]**
    (iii)   Packet Switching   **[4 Marks]**

b. Discuss the following WAN devices
    (i) Gateways   **[4 Marks]**
    (ii)   Routers   **[4 Marks]**

QUESTION THREE
a) Discuss the following transmission media
    (i) Coaxial Cable   **[4 Marks]**

    (ii) Fiber optics   **[4 Marks]**

b) Discuss three disadvantages of satellite communication   **[2 Marks]**

c) Discuss differences and similarities of TCP/IP and OSI reference models
    [10 marks]

QUESTION FOUR
a) Discuss Layers of OSI reference model   **[5 Marks]**
b) Discuss layers of TCP/IP reference model   **[5 Mark]**
c) Discuss the differences between STP cable and UTP cable   **[6 Marks]**

d) Differentiate Unguided transmission media from guided transmission
    media giving examples of each   **[4 Marks]**

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