MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS

2017/2018 ACADEMIC YEAR

FIRST YEAR SECOND SEMESTER

SCHOOL OF SCIENCE AND INFORMATION SCIENCE

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

COURSE CODE: COM 1206
COURSE TITLE: COMPUTER   NETWORKS

DATE: 25TH APRIL, 2018   TIME: 1100 – 1300 HRS

INSTRUCTIONS:
ATTEMPT QUESTION ONE AND ANY OTHER TWO QUESTIONS

This paper consists of 3 printed pages. Please turn over

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QUESTION ONE   **(30 marks)**

a.
i. State the differences between single mode fiber optical cable and multimode fiber optical cable?   (2 marks)

ii. Briefly explain why fiber cable does not get affected from cross talk?   (2 marks)

iii. What is the maximum distance 10Base2 Ethernet architecture supports?
                                                              (2 marks)

iv. Which year was the internet invented   (1 mark)

v. Who invented the world wide web and in which year   (2 marks)

b. Which of the following are the address ranges of the private IP addresses? (Choose three.)
              (3 marks)
10.0.0.0 to 10.255.255.255
200.100.50.0 to 200.100.25.255
150.150.0.0 to 150.150.255.255
172.16.0.0 to 172.31.255.255
192.168.0.0 to 192.168.255.255
127.16.0.0 to 127.31.255.255

 c. State the layers of a coaxial cable   (3 marks)

d. Explain how computers get IP addresses   (3 marks)

e. Precisely define protocol and an interface   (2 marks)

f. Discuss the optical fiber as a bounded transmission media of data   (6 marks)

 g. Explain the difference between baseband and broadband network   (4 marks)

QUESTION   TWO   (20 marks)

    a. Discuss satellite as unbounded media for data transmission   (6 marks)

    b. Discuss the functions of   application layer   (2 marks)

    c. Define a bus network and discuss its advantages and disadvantages (6 marks)

    d. Discuss copper wires as a media of data transmission stating the advantages and disadvantages   (6marks)

QUESTION   THREE   (20 marks)

    a. There are five classes of IP addresses in IPV4 .Name them and their ranges

                                                  (5marks)

    b. Discuss the following types of logs that are found in a computer system   (3 marks)
        i.   System logs
       ii.   Event Logs
      iii.   History Logs

  c. There are different utilities that can be used to monitor a   network , state three of them

                                        (3 marks)

  d. Explain the following wireless networking standards   (9 marks)

        i.   802.11a
       ii.   802.11b
      iii.   802.11g
      iv.   802.11n

QUESTION   FOUR   (20 marks)

A) Using examples explain the following classification of Networks   (12 marks)
        i.   LAN
       ii.   MAN
      iii.   WAN
      iv.   CAN

 B) Discuss the following Network Devices   (8 marks)
        i.   Repeater
       ii.   Bridge
      iii.   Switch
      iv.   Router
       v.   Firewall
      vi.   Proxy server
     vii.   Wireless Access point.
    viii.   DNS

END//