



TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:
BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY
(BSIT 12J)

BIT 2204: NETWORK SYSTEM ADMINISTRATION

END OF SEMESTER EXAMINATION
SERIES: DECEMBER 2013
TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consists of **FIVE** questions. Attempt question **ONE** and any other **TWO** questions

Maximum marks for each part of a question are as shown

This paper consists of **TWO** printed pages

Question One (Compulsory)

- a) Describe any TWO tools that are used to monitor network performance (4 marks)
- b) Describe the functions of a gateway in a computer network (4 marks)
- c) Describe the function of the following OSI reference mode layers in Network administration:
(i) Application
(ii) Network
(iii) Transport (6 marks)

- d) Distinguish between NFS Network file system and FTP file transfer protocol (4 marks)
- e) Describe any FOUR transmission media impairment that are found in electrical cables (4 marks)
- f) Distinguish between DQDB Distribute-Queue Dual Bus and FDDI Fibre distributed data interface. (4 marks)
- g) (i) Define modulation
(ii) State TWO advantages of using modulation (4 marks)

Question Two

The organization that your are working for is looking for ways to reduce cost by improving on bandwidth efficiency, power efficiency among other gains that can be achieved by use of digital modulation. REQUIRED.

Discuss some of the digital modulation techniques that you would propose to the organization to overcome these problems.

Question Three

Describe the roles played by the following internetworking devices in network administration:

- (i) Serves
 - (ii) Bridges
 - (iii) Routers
 - (iv) Gateways
 - (v) Switches
- (20 marks)

Question Four

- a) Define carrier sense multiple access with collision detection CSMA/CD
- b) Describe how CSMA/CD function with the aid of a sketch
- c) Outline the application of CSMA/CD in network administration (20 marks)

Question Five

- a) Distinguish between token bus and token ring with the aid of sketch (4 marks)
- b) Outline TEN Network administration tips that a network administrator is required to keep at their finger tips. (5 marks)
- c) (i) Define network configuration
(ii) Describe how network configuration is done in the following network models:
 - (i) Peer-to-peer
 - (ii) Client/server

(11 marks)