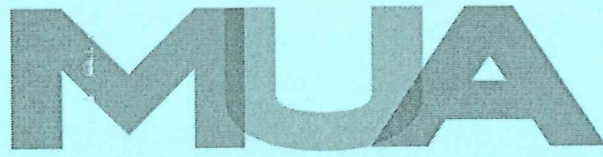


The
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DIPLOMA UNIVERSITY EXAMINATIONS
SCHOOL OF MANAGEMENT AND LEADERSHIP
DIPLOMA IN INFORMATION COMMUNICATION
TECHNOLOGY/ DIPLOMA IN BUSINESS INFORMATION
TECHNOLOGY.

DIT 201 : CONCEPTS OF DATA COMMUNICATION AND NETWORKING.

DATE: 1st APRIL 2022

DURATION: 2 HOURS

MAXIMUM MARKS: 70

INSTRUCTIONS:

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **SIX (6)** questions.
4. Question **ONE** is compulsory.
5. Answer any other **FOUR** questions.
6. Question **ONE** carries 30 **MARKS** and the rest carry **10 MARKS** each.
7. Write all your answers in the Examination answer booklet provided.

QUESTION ONE

Read the Case Study below carefully and answer the questions that follow:

Data communication and networking is the connection of a great number of computers for the purpose of information exchange. Today information is the most important resource, because with its help one can receive education, learn something new, make a business, change the life of the country, etc. In order to maintain the process of information exchange numerous appliances and techniques have been invented.

First of all, it is the local networking or the worldwide Internet, which helps users produce, store, analysis and process information and exchange it form the different parts of the world. Information technology has become one of the most profitable and important spheres, because the IT analysts manage the process of communication and networking and improve this process constantly.

The whole information which can be found in the Internet is stored on the special databases and if one wants to get access to the certain type of data, he can surf the web and find it on a server. It is obvious that the technology of networking and data communication is constantly improving and the experts work hard to make the access to the information quicker and easier.

Nearly every day new software and networking technologies appear and provide users with the high-quality and rapid means of information processing and communication. Today the web has become the core means of communication, because it is easier and cheaper to write an email or an instant message to any part of the world than to ring someone up or write a common paper letter. So, the intention to save time is the main reason why so much attention is paid to the development of the IT.

Required:

- A) In reference to the above case study, discuss any 4 uses of the Internet.
[8Marks].
- B) From the above case study, Define the term Internet [2 Marks]
- C) Referring from the above case study, Define the term Data Communication.
[4 Marks]
- D) In reference from the above case study, discuss for factor in which the computer networks are classified.
[8 Marks]
- E) From the case study above, list 4 types of network LAN technologies
[4 Marks]
- F) In reference to the above case study describe the term Computer Network Security.
[4 Marks]

QUESTION TWO.

- A) List any 4 types of transmission media [4 Marks].
- B) Define the term Multiplexing and discuss 3 types of multiplexing.
[6 Marks].

QUESTION THREE.

- A) Evaluate the concept of Data network [4 MARKS]
- B) Describe 3 different types of Routing [6 MARKS]

QUESTION FOUR.

- A) Differentiate the OSI model vs the Internet model with illustration from a neat diagram [6 MARKS]
- B) Differentiate between Interruption and Integrity. [4MARKS]

QUESTION FIVE.

- A) Define the term error [2 MARKS]
- B) Define the term Switching. [2 MARKS]
- C) Explain the 3 types of switching [6MARKS]

QUESTION SIX.

A) Illustrate any 3 functions of the Data Link Layer in Computer Networking.

[6 Marks]

B) According to your understanding list the 4 types of routing. **[4 MARKS]**