



**REFORMED CHURCH UNIVERSITY**

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**FACULTY OF ARTS, THEOLOGY AND RELIGIOUS  
STUDIES**

**Bachelor of Theology Honours Degree  
Introduction To Information Technology**

**HBATH 104**

**Part 1 Semester 1 Examination**

**Total Marks [100]**

Date: December 2020

Time: 3 Hours

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**INSTRUCTIONS**

1. This paper has *six (6)* questions
2. Each question carries *25 marks*
3. Answer four (*4*) questions
4. Start each question on a new page

1(a) Explain the function of EACH of the following hardware components:

(i) Control unit (2)

(ii) Arithmetic and logic unit (ALU) (2)

(iii) Read Only Memory (ROM) (2)

(iv) Random Access Memory (RAM) (2)

(b) Distinguish between primary and secondary memory. (4)

(c) With reference to a diskette, state the relationship between a track and a sector (4)

(d) Convert the following:

(i) The decimal number 25 to binary, using an eight-bit representation. (4)

(ii) Binary number 11001011 to its decimal number equivalent (5)

2. Your teacher has given you notes on Windows NT, Windows 2000, UNIX and Linux.

(a) State the type of software illustrated in the above examples. (2)

(b) Explain why this software is necessary for a computer system.

(8)

(c) Describe the following types of application software:

(i) General purpose (2)

(ii) Customized (2)

(iii) Integrated (2)

(iv) Specialized (2)

(d)(i) Explain 'teleconferencing'. (2)

(ii) State THREE advantages of teleconferencing. (3)

(iii) State TWO hardware requirements for teleconferencing. (2)

3. The following questions relate to Database Management:

The Traffic Department is concerned about reckless driving by drivers of public transportation vehicles using a particular route. On a daily basis, the traffic department would like to store information on the Registration Number of the Vehicle, the type of Vehicle (Bus, Mini-Bus, and Hired Car), the driver of the

vehicle and the number of tickets issued to the driver. You have been asked to create a database table named TICKET to store the information.

- (a) Create the structure of the table TICKET. Your structure should indicate the name, data type and size for EACH field in your table. (6)
- (b) State ONE reason for using a form to input data into your table. (2)
- (c) Give ONE example of a record in the TICKET table. (3)
- (d) Explain any FOUR advantages of the database system (8)
- (e) Write a query to show ALL female drivers of Hired Cars. (4)
- (f) Explain data redundancy (2)

4. The widespread use of ICT has had a huge impact on the way that individuals and organizations work. One impact is that some employees are able to work from home.

- a) (i) Identify and explain any three advantages and two disadvantages to an employee of working from home. (10)
- (ii) Describe any three other changes in the way that individuals and organizations work that have resulted from the widespread use of ICT. (6)
- (iii) Identify and explain any one advantage and one disadvantage of having employees working from home to an organization. (4)
- b) Mucheke Centre has 50 networked computers with access to the internet. The computers are used by local people for a variety of different reasons. James uses a computer at the centre to send emails with photographs to his brother who lives in another country.
  - (i) Describe how James could get some printed photographs into a format that can be attached to an email. (2)

(ii) James has been advised to keep backup copies of his photograph files.

State two reasons for the advice. (2)

(iii) Name one appropriate storage device for keeping backup copies of the photographs. (1)

5. Discuss some of the biggest trends impacting the IT industry and explain how they affect businesses.

(25)

6. (a) With the aid of diagrams, explain the THREE basic network topologies. (9)

(b) Discuss why computer networking is important. (6)

(c) Distinguish between:

(i) Peer to peer and client/server networks (4)

(ii) LAN and WAN (4)

(iii) Shielded Twisted Pair (STP) and Unshielded Twisted Pair (UTP) cables (2)

***End of Paper***