

**University of Ruhuna - Faculty of Technology**  
**Bachelor of Engineering Technology Honours Degree**  
**Level 3 (Semester I) Examination, June 2023**  
**Academic year 2021/2022**

**Course Unit: ENT 3132 – Computer Hardware and Network Maintenance (Written)**

**Duration: 2 hours**

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- This paper contains **four (04)** questions on **two (02)** pages.
  - Answer all the questions.
  - Each question carries equal marks.
  - This is a **closed book** examination.
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Q1.

- a) What is meant by **form factor in RAMs**? (02 marks)
- b) Name four (04) **types of form factors** of RAMs. (04 marks)
- c) What does **SDRAM** stands for and mention at least two (02) of its functions. (04 marks)
- d) Name five (05) resources that should be included in **Audio and Video Editing Workstations**. (05 marks)
- e) Contrast the **inter-related features** that should be considered when selecting the following components.
  - i. Motherboard
  - ii. CPU
  - iii. Casing
  - iv. Memory(10 marks)

Q2.

- a) Briefly evaluate the speciality of **USB Type C connector** compared to the other USB types. (02 marks)
- b) Where does **type A and type D HDMI connectors** are used? (04 marks)
- c) What is the difference between **traces and busses** on a motherboard? (04 marks)
- d) Briefly explain the **Interrupt Request Line (IRQ)** of a computer system. (05 marks)
- e) Appraise the roles of **BIOS and CMOS** in starting a computer system. (10 marks)



Q3.

- a) Compare and contrast two (02) advantages and two (02) disadvantages of **bus topology**. (04 marks)
- b) Differentiate a **hub** and a **switch** depending on the **ability to broadcast and unicast**. (04 marks)
- c) Briefly explain **default gateway**. (03 marks)
- d) Default subnet mask of a **Class B IP address** is 255.255.0.0. How many **hosts** can be created from this type of address, and explain the reason why you deducted two hosts? (04 marks)
- e) Compare and contrast the **IPV4 and IPV6** under five (05) points. (10 marks)

Q4.

- a) Explain in steps the recovery processes that could be done by the user when a **program is not responding** while the computer screen is **frozen or stuck**. (05 marks)
- b) Your office is going to call tenders on 50 desktop computers which can run heavy simulations. However, you are suspicious that when focussed more on the motherboard, companies tend to lower the unit price by putting in low quality power supplies. Explain how you investigate on the matter and notify the tender board. (10 marks)
- c) Evaluate the importance of the **documentation process** with regard to computer system faults. (10 marks)

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