



HIGHER EDUCATION PROGRAMMES

Academic Year 2023:	July - December
Formative Assessment 1:	Technical Systems and Support 1 (HTSS100-1)
NQF Level, Credits:	5, 24
Weighting:	40%
Assessment Type:	Essay Questions
Educator:	L. Carolus
Examiner:	L. Carolus
Due Date:	8 September 2023
Total:	100 Marks

Instructions:

- This paper consists of five (5) questions.
- It is based on Units 1 – 4 (Chapters 1-7) of your prescribed textbook.
- All questions are compulsory.
- Your assessment must be typed using:
 - Font: Arial
 - Font size: 12
 - Line spacing: 1.5
- A **Copyleaks Report** will be issued via ColCampus once the assignment is submitted. Please ensure that you follow the correct steps when uploading your assignment, to ensure that the Copyleaks Report is correctly issued. You should be working towards a similarity rating of 30% or less. Where a Copyleaks Cheat Detection Report is issued, your submission will automatically be treated as if you received a similarity rating in excess of 30%. Currently, no marks will be deducted for a similarity rating that exceeds 30%.

QUESTION 1**[19 marks]**

You are a computer technician. A client has approached you with an old dirty computer and monitor that you have been asked to deep clean so that he can sell it. Since the personal computer (PC) is old and dirty on the inside, you would need to keep track of everything as you open it.

1.1 Determine guidelines that you will follow when opening the PC. (9 marks)

1.2 Identify standard apparatus any information technology (IT) technician should obtain before opening a PC. (10 marks)

QUESTION 2**[30 marks]**

Jessie is in the process of purchasing computer parts for her new personal computer (PC). She has already obtained the central processing unit (CPU) she needed and is looking for a motherboard.

2.1 Explain what she needs to look out for when purchasing motherboards and CPUs for one functioning computer system. (12 marks)

2.2 Jessie has already purchased the processor but is unsure whether it is the right fit for the motherboard concerning performance.

Establish factors she should investigate that would clarify her intent to get the most out of her processor when pairing it with the motherboard.

(18 marks)

QUESTION 3**[17 marks]**

3.1 You have been an avid gamer using your personal computer (PC) for three (3) years. It ran perfectly well until about a month ago when it started slowing down and restarting when running intensive games for longer than 10 minutes. You have a suspicion that your PC is running too hot.

Describe three possible solutions you can implement to solve the problem. (9 marks)

3.2 You decide to use this opportunity to upgrade your CPU cooling system. Your system already has fans, heat sinks, and thermal compounds.

Identify and describe the cooling system you can use that would also be effective should you decide to overclock your CPU. (8 marks)

QUESTION 4 [25 marks]

4.1 You are running out of storage space on your personal computer (PC) and considering upgrading it.

Establish some basic principles you will use when installing your new storage device. (14 marks)

4.2 Determine the fastest, most reliable type of memory available for purchase today, and describe how it works. (11 marks)

QUESTION 5 [9 marks]

You are working for an information technology (IT) organisation, and it happens that on the day you need to do a PowerPoint presentation to your colleagues, you realise that the PowerPoint file did not copy over to your hard drive correctly. You must connect to your home PC from the office and stream the PowerPoint file. The PC doesn't have third-party applications installed to perform the task, so you must use what is available on the operating system.

Analyse the situation and elaborate on the technique used in Microsoft Windows.

GRAND TOTAL: 100