

The
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CERTIFICATE UNIVERSITY EXAMINATIONS
SCHOOL OF SCIENCE AND TECHNOLOGY (SST)
CERTIFICATE IN BUSINESS INFORMATION
TECHNOLOGY

**CBT 105 : INTRODUCTION TO COMPUTER REPAIR AND
MAINTENANCE**

DATE: 28TH JULY 2026

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:

James is a third-year university student who heavily relies on his personal computer for coursework, online research, and entertainment. Recently, he has noticed that his machine is no longer performing as efficiently as before. The system frequently overheats and shuts down without warning, disrupting his academic work and causing him to lose unsaved assignments.

In addition, James's computer has begun displaying a blue screen error (BSOD) whenever he attempts to run multiple applications at the same time. He has also observed that the booting process takes unusually long, forcing him to wait for several minutes before he can access his desktop. This poor performance has left him frustrated and worried about the future reliability of his device.

Another challenge James faces is that some of his external devices, such as his printer and flash drives, are not being recognized when plugged into the computer. He suspects that the problem could be related to faulty ports or drivers, but he is not certain of the exact cause. This has limited his ability to print assignments and transfer important files.

James has considered replacing his computer altogether, but due to financial constraints, he would prefer to repair and maintain it. As a student of CBT 105 Computer Repair and Maintenance, you are required to apply your knowledge of hardware, software, troubleshooting, and maintenance procedures to analyze James's situation and recommend possible solutions.

Required:

a) Identify any three basic components of James's computer system that could be contributing to overheating and explain their role.
[5 MARKS]

b) The computer frequently shows a Blue Screen of Death (BSOD). Explain two possible causes and their solutions.

[5 MARKS]

c) James's printer is not being recognized by the computer. Identify two possible causes related to peripheral ports and connections.
[5 MARKS]

d) The computer takes too long to boot. Suggest two methods of upgrading system performance that could help.
[5 MARKS]

e) Discuss FOUR (4) Fundamental components that make up a computer system

**[5
MARKS]**

f) Discuss two legal or ethical issues James should be aware of when repairing or upgrading his system.
[5 MARKS]

QUESTION TWO

a) Differentiate between RAM and ROM **(4 MARKS)**

b) A client wants to improve the performance of a five-year-old computer without buying a new machine. Suggest and justify two hardware or software upgrades that would enhance the system's speed.
(6 MARKS)

QUESTION THREE

a) A client brings a computer that powers on but does not display anything on the monitor. Using your knowledge of computer

hardware, explain the steps you would take to diagnose and solve this problem. **(6 MARKS)**

- b) A student complains that her computer shuts down after 15 minutes of use. Analyze the likely causes of this problem, and how would you prevent it from recurring in the future

(4 MARKS)

QUESTION FOUR

- a) What is the Motherboard? State and explain THREE parts **(6 MARKS)**

- b) Memory is an element crucial for data to be stored. Contrast primary and secondary storage

(4 MARKS)

QUESTION FIVE

- a) During startup, a computer produces three short beeps and fails to boot. Apply your knowledge of BIOS/POST to interpret this error and propose a solution.

(5 MARKS)

- b) A desktop computer has USB ports that suddenly stop detecting flash drives and printers. Explain two possible causes of this issue and how you would resolve it.

(5 MARKS)

QUESTION SIX

- a) In a maintenance routine, you are required to perform preventive and corrective maintenance on several office computers. Explain the

difference between the two approaches, giving one example for each.

(5 MARKS)

- b) A technician installs pirated software on a customer's computer to save costs. From a legal and ethical perspective, explain why this action is wrong and suggest the proper alternative.

(5 MARKS)