



CICT PART I SECTION 2
OPERATING SYSTEMS - PRACTICAL

TUESDAY: 21 May 2019.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question.

Ensure that you are provided with a computer, a flash disk and printing materials.

Additional instructions:

- 1. Save all your work (including theory answers where necessary) in the flash disk provided and in a folder bearing your registration number.**
- 2. Work on each question should be saved in the subfolder contained in the folder created in number 1 above. The name of the subfolder should correspond to the question number.**
- 3. Your registration number MUST appear as a header on every printout containing your answers.**
- 4. You must indicate the number of the question answered on the header created in number 3 above.**

Note: The information in numbers 1-4 above must be computer generated.

At the end of the examination duration, you should hand in to the invigilator(s):

- (a) The flash disk containing your work.**
- (b) All printed work.**
- (c) All unused printing paper(s).**

QUESTION ONE

Create a word processor document named "Question One" and use it to save your solutions to the following questions:

- (a) Explain the term "job scheduler". (1 mark)**
- (b) State an advantage and a disadvantage of layered structure approach to operating systems. (2 marks)**
- (c) Examine three reasons that would signal to you that it is time to upgrade your operating systems. (3 marks)**
- (d) Use the appropriate tool to troubleshoot your printer. (4 marks)**
Capture a screenshot showing the progress of the above process.
- (e) Use an appropriate tool to view details of problems affecting your operating system's performance. (3 marks)**
Capture a screenshot of the above details.
- (f) Capture a screenshot of the following properties of your computer: (2 marks)**
 - (i) General administrator's properties. (2 marks)**
 - (ii) Administrator's share properties. (2 marks)**
- (g) Configure your computer's problem reporting settings to automatically check for solutions and send additional data, if needed. (3 marks)**
Capture a screenshot showing how the above task was achieved.
Print "Question One" document.

(Total: 20 marks)

QUESTION TWO

Create a word processor document named "Question Two" and use it to save your solutions to the following questions:

- (a) Explain the meaning of the term "fatal exception error" in relation to operating systems. (2 marks)**
- (b) Distinguish between "software update" and "software upgrade". (4 marks)**

- (c) Configure your computer's desktop to disable it for preview with aero peek.
Capture a screenshot showing how the above task was accomplished. (2 marks)
- (d) Capture a screenshot of your computer's advanced performance option. (2 marks)
- (e) Use the flash disk provided to accomplish the following tasks:
- (i) Use the appropriate tool to display the volumes contained in the flash disk.
Capture a screenshot showing these volumes. (3 marks)
 - (ii) Change your flash disk drive letter to K.
Capture a screenshot showing the results. (2 marks)
 - (iii) Check for errors in your flash disk.
Capture the final screenshot showing the results. (2 marks)
- (f) On Question Two document, set the following properties:
- Title: OS practical
Author: Your kasneb Registration Number
Company: kasneb
- Capture appropriate screenshots showing how the above task was accomplished. (3 marks)
- Print "Question Two" document.
- (Total: 20 marks)**

QUESTION THREE

Create a word processor document named "Question Three". Use the word processor document to save your answers to questions (a) to (f) below:

- (a) (i) Describe the role of registry in operating systems. (2 marks)
- (ii) The table below shows processes and their burst time. Processes arrive in the order P2, P3 and P1 respectively.

Process	Burst time
P1	24
P2	3
P3	3

Required:

- Calculate the CPU average waiting time showing the Gantt chart for the schedule. (4 marks)
- (b) Configure the paging file size for your computer to be managed automatically by the operating system.
Capture and save the resulting screenshot. (4 marks)
- (c) To enable your computer to run more efficiently, there is need to optimise your drives.
Capture and save the screenshots showing how to schedule the optimisation of all the drives on a weekly basis. (4 marks)
- (d) Using an appropriate tool, configure your computer boot menu "time out" to 40 seconds.
Capture a screenshot of the command prompt setting before execution. (2 marks)
- (e) Capture a screenshot showing how you would configure your computer to display the file name extensions. (2 marks)
- (f) Capture a screenshot showing how you would customise the behaviour of icons that appear on your taskbar. (2 marks)
- Print "Question Three" document.

(Total: 20 marks)

QUESTION FOUR

Create a word processor document named "Question Four" and use it to save your solutions to questions (a) to (e) below.

- (a) (i) Identify two ways in which a process in an operating system could use a resource. (2 marks)
- (ii) Explain the two memory allocation mechanisms used by operating systems. (4 marks)
- (b) Configure your computer to show a solid colour background with a tile fit. (3 marks)
- (c) On your flash disk, create a folder named "College" and configure it as follows:
 - (i) Customise it to use the hard drive icon. (2 marks)
 - (ii) Share its contents using "New College" share name. (2 marks)
 - (iii) Allow all users to access the folder contents by allowing or giving them the full control and change permissions. (2 marks)

Capture and save the screenshots showing the results of each of the above tasks.

- (d) Create a user mode (single window with limited access) console named "Calculator" and do not allow the user to customise views.
Capture and save the screenshot showing how the task was done. (3 marks)
- (e) Configure the computer to save copies of files after every 30 minutes and to keep saved versions over a period of 2 years. (2 marks)

Capture and save the resulting screenshot.

Print "Question Four" document.

(Total: 20 marks)

QUESTION FIVE

Create a word processor document named "Question Five" and use it to save your solutions to questions (a) to (e) below:

- (a) (i) A domain computer setup includes one or more domain controllers.
In the context of the above statement, describe a domain controller. (2 marks)
- (ii) List four hardware specifications that should be verified before installing an operating system. (4 marks)
- (b) Perform the following tasks on your computer:
 - (i) Change internet time settings to synchronise with an internet time server. (2 marks)
 - (ii) Prompt for a profile to be used when starting Microsoft outlook. (2 marks)
 - (iii) Set the mouse visibility to display mouse pointer trails.
Capture a screenshot showing the results of each of the above tasks. (1 mark)

- (c) Use an appropriate tool to display the name of the volume in drive C of your computer, the volume serial number and display the directory structure horizontally.
Capture and save the screenshot of the final window. (3 marks)

- (d) Set your computer's speech properties to run speech recognition at start-up and to use a desktop microphone.
Capture and save the screenshot showing how the above task was achieved. (2 marks)

- (e) Configure your device manager as follows:
 - (i) To show the description bar and to disable the standard tool bar. (2 marks)
 - (ii) To view resources by type.
Capture and save the screenshots showing the results of the above tasks. (2 marks)

Print "Question Five" document.

(Total: 20 marks)