



CICT PART I SECTION 2

OPERATING SYSTEMS - PRACTICAL

TUESDAY: 24 November 2020.

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 processing document named "Question One" and use it to save your solutions to the questions below:

- (a) (i) Explain the meaning of the term "spooling". (2 marks)
- (ii) Spooling systems are prone to deadlock.
Explain how you would handle a deadlock in spooling. (2 marks)
- (b) Identify two ways that operating systems implement virtual memory. (2 marks)
- (c) Customise your computer's folder options:
 - (i) To open each folder in its own window.
Capture the resulting screenshot. (2 marks)
 - (ii) So that when you search among other things you include natural language.
Capture the resulting screenshot. (2 marks)
- (d) Turn off the system icons on your task bar for volume, power and action centre.
Capture a screenshot showing the results of the above action. (2 marks)
- (e) (i) Create an account for a user named "Simile" to be used by children to log on to the computer. (2 marks)
- (ii) Set up parent controls for Simile account to allow usage between 6:00 p.m. and 8:00 p.m. everyday from Monday to Friday and 7:00 a.m. to 11:00 a.m. on Saturdays and none at all on Sundays.
Capture a screenshot showing the above set up. (3 marks)

- (f) Change the icon of user Simile to the image of a football.
Capture a screenshot showing the before and after images. (1 mark)
- (g) Capture a screenshot of your computer's registry environment of "hkey current user". (2 marks)

Print Question One document.

(Total: 20 marks)

QUESTION TWO

Create a word processing document named "Question Two" and use it to save your answers to questions (a) to (f) below:

- (a) Messe Njeri has been using his computer on a stand-alone environment. Recently, he reported that the system has become very slow.
Summarise three steps that you would undertake to resolve the above problem. (4 marks)
- (b) Describe "worst-fit" algorithm as used in memory management. (2 marks)
- (c) Use an appropriate tool to capture and save a screenshot showing the interrupt requests (IRQs) for all the devices in your computer. (3 marks)
- (d) Using the management console, create a new task pad view with the following parameters:
- Style for result pane: horizontal list
 - Style for task description: text
 - Task pad view: selected tree item
- Name the console "OS PJ" and give it a description of "OS Prac November 2020".
Capture and save all the steps followed in the above task. (4 marks)
- (e) Using an appropriate tool, capture and save a screenshot showing:
- (i) How you would enable/disable processes that initiate during computer booting. (3 marks)
 - (ii) The full description of the Bluetooth support service. (2 marks)
- (f) Create a restore point named "CICT November" for drive C to protect the system from unwanted system changes. (2 marks)

Print Question Two document.

(Total: 20 marks)

QUESTION THREE

Create a word processing document named "Question Three" and use it to save your answers to the questions below.

- (a) Explain the relationship between operating systems and computer hardware. (2 marks)
- (b) John Kimona bought a second hand printer downtown to be used on his personal computer. On connecting the printer to his computer, it could not be detected by the computer making it impossible to print. The computer kept displaying a message "install print driver".
- Required:**
- (i) Explain to John Kimona the meaning of the term "print driver". (1 mark)
 - (ii) Advise John Kimona on how to acquire printer drivers. (1 mark)
 - (iii) Explain to John Kimona how to resolve his printer problem. (2 marks)
- (c) (i) You wish to update a product key for your computer's operating system.
Capture and save the screenshot showing the window for product key entry. (2 marks)
- (ii) Display the environment variables set in your computer.
Capture and save the screenshot of the above display. (2 marks)

- (d) Quick access is a feature in Windows operating system that enables users to revisit the locations of file and folders in their computer that they frequently use. This can compromise the user's privacy. Disable the quick access in your computer and capture and save the screenshots showing how to accomplish the above task. (3 marks)
- (e) You have been given an assignment to research on network operating system. Capture and save a screenshot showing how you would present your research on two screens concurrently. (3 marks)
- (f) (i) Trackers follow you around when online to collect information about your browsing habits. To safeguard yourself, configure your browser setting to strict. (2 marks)
- (ii) Clear all cookies and data stored by your browser. (2 marks)
- Capture and save the screenshots showing how you accomplished the above tasks.

Print Question Three document.

(Total: 20 marks)

QUESTION FOUR

Create a word processor document named "Question Four".

Use the word processor document to save your answers to questions (a) to (c) below.

- (a) (i) Explain the term "starvation" as used in operating systems. (2 marks)
- (ii) Explain the cause of starvation in computer systems. (2 marks)
- (iii) Suggest two remedies for starvation in operating systems. (2 marks)
- (b) Perform the following configurations on your computer:
- (i) Not to show notification bar when a pop-up is blocked and set blocking level to high in order to block all pop-ups. (3 marks)
- (ii) Configure the user profile service to reset fail count after 2 days and to enable actions for stops with errors. (2 marks)
- (iii) Configure your computer to instruct your browser to save the list of websites that have been visited for the last 30 days. (3 marks)

Capture and save screenshots showing the results of the above configurations.

- (c) Perform the following tasks on your computer:
- (i) Set your computer system to selective start up with the options to load system services and not to load start up items. (2 marks)
- (ii) Configure your local audit policy to audit account logon events when attempts are successful. (2 marks)
- (iii) Configure your computer to set processor power management to 6% minimum processor state. (2 marks)

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

Print Question Four document.

(Total: 20 marks)

QUESTION FIVE

Create a word processor document named "Question Five".

Use the word processor document to save your answers to questions (a) to (e) below:

- (a) Suggest three reasons why a computer systems administrator should configure hardware profiles in operating systems. (3 marks)
- (b) Miss Abina recently bought a notebook computer running on Windows 8.1 platform. She wishes to do a new installation of Windows 10 on this laptop from an image stored on a USB flash disk. The notebook computer has no CD/DVD drive. Explain to Miss Abina the required configurations on her notebook in order to achieve her objective. (3 marks)

- (c) (i) Using the command line prompt, create a folder named "CICT Examination" on your flash disk.
Capture and save the window showing the command used to accomplish the above task. (3 marks)
- (ii) Share the folder created above with a new user "Margre 2020".
Capture and save four screenshots showing the procedure you followed to complete the above task. (4 marks)
- (d) Use an appropriate tool to show the version of the Windows operating system you are using.
Capture a screenshot showing the above version. (3 marks)
- (e) Change the details of how folders/documents are viewed in the control panel in order to display; name, date modified, authors, copyright, space used and total file size.
Capture appropriate screenshots showing the above display for Libraries document folder. (4 marks)
- Print Question Five document.

(Total: 20 marks)

.....

access thousands of free content on www.freekcsepastpapers.com