kasneb

CICT PART I SECTION 2

OPERATING SYSTEMS - PRACTICAL

TUESDAY: 31 August 2021.   **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 following terms as used in an operating system:

    (i) Sysedit.   (1 mark)

    (ii) Hibernate.   (1 mark)

(b) Explain the two functions of job scheduler as used in process scheduling.   (4 marks)

(c) Demonstrate how you would perform the following tasks:

    (i) Display system drivers' information.   (2 marks)

    (ii) Configure your computer to boot safely for active directory repair.   (2 marks)

    (iii) Set your computer to sleep after 40 minutes on battery.   (2 marks)

Capture and save the screenshots showing how you accomplished the tasks.

(d) (i) Capture a screenshot showing your computer's IRQs.   (2 marks)

    (ii) Capture a screenshot showing a view of your windows update history.   (3 marks)

(e) Configure your computer file explorer not to show recently used files in quick access and to open each folder in its own window.   (3 marks)

Capture and save the screenshots showing how you accomplished the above tasks.

Print "Question One" document.   **(Total: 20 marks)**

QUESTION TWO

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

     (i)   Outline two root keys as used in operating systems.   (2 marks)

     (ii)   State two registry data types.   (2 marks)

     (iii)   Distinguish between "asymmetric" and "symmetric" multiprocessing as used in operating systems.
          (2 marks)

(b)   Customise your start menu to display:

- Computer as a menu
- Control panel as a link
- Devices and printers
- Documents as a link
- Five of the current/recent programs

Capture appropriate screenshots for the above.   (5 marks)

(c)   (i)   Create a console named "Home" with a full access user mode.   (2 marks)

     (ii)   Add authorisation manager, IP security monitor and local services snap-ins to the home console and allow for changes in the parent snap-in.   (4 marks)

Capture and save the screenshots showing how you accomplished your tasks.

(d)   Your boss would like to hide their desktop items from being seen by the audience when presenting the financial year report.

Capture and save the screenshot that would enable your boss hide the desktop items.   (3 marks)

Print "Question Two" document.

(Total: 20 marks)

QUESTION THREE

Create a word processor document named "Question Three" and use it to save your solutions to questions (a) to (f).

(a)   Explain the causes and solutions to the following operating system faults:

     (i)   Failure to boot.   (2 marks)

     (ii)   Failure to detect RAID during installation.   (2 marks)

     (iii)   Failure of a service to start.   (2 marks)

(b)   Configure your computer to limit disk drive C: usage space to 10MB and to log events when a user exceeds their warning level.

Capture and save the screenshot showing how the task was done.   (3 marks)

(c)   Configure your personal computer to automatically manage paging file size for all the drives.

Capture and save the screenshots to achieve the above process.   (3 marks)

(d)   Capture and save the screenshots to enable system protection for your drive C.   (3 marks)

(e)   Capture a screenshot showing how you would project your screen to the projecting screen only.   (2 marks)

(f)   Add a snap-in for the local users and groups on your computer.

Capture and save the screenshots for the step-by-step process to achieve the task.   (3 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).

(a)   Outline four factors that a computer technician will consider before upgrading an operating system.   (4 marks)

(b)   Explain a resource-allocation graph as used in deadlocks.   (2 marks)

(c)   Perform the following task:

Add an additional clock called "clock 2" whose time zone is "Santiago".

Capture and save the framed screenshot of the above task.

                                               (3 marks)

(d)   (i)   Capture a screenshot showing the type of your hard drive and its specifications.   (3 marks)

       (ii)   Create a virtual hard disk on your desktop of 5MB size with the VHD disk format which should be of fixed size.

Capture and save the screenshot used to perform the above task.   (3 marks)

(e)   (i)   Change your documents properties to optimise its library for videos.

Capture a screenshot showing how this is done.   (3 marks)

       (iii)   Capture a screenshot showing display colour correction.

Print "Question Four" document.   (2 marks)
                                             (Total: 20 marks)

QUESTION FIVE

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

(a)   (i)   Explain the term touch user interface citing where it is used.   (2 marks)

       (ii)   Compare between a process and a thread using:

- Time taken to terminate.
- Efficiency in communication.

                                             (4 marks)

(b)   (i)   Create a folder called "Kenya" and pin it at the start menu.

Capture and save the screenshot.   (2 marks)

       (ii)   Resize the folder created in (b) (i) to small.

Capture and save the screenshot.   (2 marks)

       (iii)   Deny permissions for users to access this folder.

Capture and save the screenshot.   (2 marks)

(c)   (i)   Capture a screenshot showing a log of all administrative events.   (2 marks)

       (ii)   Create a custom view of your administrative events filtering based on:

- Event level: warning
- Log by: applications and service logs
- Save it as Eventcust

Capture appropriate screenshots.   (4 marks)

(d)   Capture and save the screenshot showing the windows mobility settings on your computer.   (2 marks)

Print "Question Five" document.

                                             (Total: 20 marks)

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