kasneb

CICT PART I SECTION 2

OPERATING SYSTEMS - PRACTICAL

TUESDAY: 18 May 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 processing document named "Question One". Use the word processor document to save your answers to questions (a) to (g) below:

(a)   Explain the following terminologies as used in operating systems:

         (i)   Throughput.   (2 marks)

         (ii)   Turnaround time.   (2 marks)

(b)   Demonstrate two ways of eliminating a hold and wait deadlock.   (2 marks)

(c)   Use an appropriate tool to display the following information on your local computer:

         •   BIOS version/Date.
         •   System Model.
         •   Windows Directory.

         Capture a screenshot of the information above.   (3 marks)

(d)   Configure your computer to turn on toggle keys and filter.

         Capture and save the screenshots of the resulting windows.   (2 marks)

(e)   Change the user account control setting to always notify you when apps try to install or make changes to the computer.

         Capture and save the screenshots showing the step by step procedure of accomplishing the above task. (3 marks)

(f)   Capture and save screenshots showing the status and the process identifier (IDs) of the processes currently running in the Central Processing Unit (CPU).   (3 marks)

(g)   Capture and save screenshots showing how you would display images both on the computer and the projected screen during a presentation session. (3 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 (e).

(a)   (i)   Define the term "Windows Registry" as used in operating systems. (2 marks)

(ii)   Describe "hives" as used in windows registry. (2 marks)

(b)   Outline two features of a command-line interface. (2 marks)

(c)   Configure your computer settings to determine the number of failed logon attempts that cause the user account to be locked out if he makes ten (10) invalid logon attempts.

Capture and save the screenshots showing the results of the above task. (3 marks)

(d)   Capture and save screenshots showing your computer's running processes for .COM applications. (3 marks)

(e)   Perform the following tasks on your computer:

(i)   Set up the computer not to show application list in the start menu. (3 marks)

(ii)   Show notification when your Personal Computer (PC) requires a restart to finish updating Windows. (3 marks)

(iii)   Turn off Windows notification icon at start up. (2 marks)

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

Print Question Two document.

(Total: 20 marks)

QUESTION THREE

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

(a)   Differentiate between "an interrupt" and "a trap" in the context of Operating Systems. (4 marks)

(b)   Describe the role of Microsoft Management Console (MMC) in an Operating System. (2 marks)

(c)   Configure your computer settings to turn off the menu bar in all your files and folders.

Capture the above screenshot and save it. (3 marks)

(d)   Add the following snap-ins to the console root:

(i)   Disk management for your computer. (1 mark)
(ii)   Component services. (1 mark)
(iii)   Event viewer for the computer running the console. (1 mark)

Capture and save the resulting screenshots for the above tasks.

(e)   Display the devices and printers on your computer.

Capture and save the screenshots used to accomplish the above task. (3 marks)

(f)   Create a scheduled task named "Exam". The scheduled task should be configured as follows:
  •   Run a specified spreadsheet program for a duration of 1 day and repeat task after an hour.
  •   Run only if the user is logged on.
  •   Stop if it runs unattended for 40 minutes.

Capture and save framed screenshots for the above task. (5 marks)

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 solutions to the following questions.

(a)   Distinguish between the following terminologies as used in operating systems:

    (i)   "Job scheduler" and "CPU scheduler".   (2 marks)

    (ii)   "Ready Queue" and "Waiting Queue".   (2 marks)

(b)   Explain the Windows service as used in Operating Systems.   (2 marks)

(c)   (i)   Create a task named "CICT". Ensure that the task will run whether the user is logged on or not and ensure it should not store passwords.   (3 marks)

    (ii)   Set the task in (c) (i) above to start only if the computer is on AC power and to stop if the computer switches to battery power.   (2 marks)

    (iii)   Configure the system to restart the task in (c) (i) above 4 times if the task fails to restart every 5 minutes.   (2 marks)

    In each case, capture and save screenshots showing how you performed the above tasks.

(d)   Limit the hard disk space of your computer to a maximum of 500 MB and set warning level to 5MB.

    Capture screenshots of how these tasks are done.   (5 marks)

(e)   Capture and save screenshots showing how you would configure your computers to play a DVD movie.   (2 marks)

Print Question Four document.

(Total: 20 marks)

QUESTION FIVE

Create a word processor document named "Question Five". Use the word processor to save the answers to questions (a) to (e) below:

(a)   (i)   Define the term "paging" as used in memory management.   (2 marks)

    (ii)   Explain the role of RAID in a computer system.   (2 marks)

(b)   Describe three operating system's accessibility features available for people with disabilities.   (3 marks)

(c)   Set your computer to turn off the internet security messages, network firewall and to turn on virus protection.

    Capture and save the screenshots showing how you accomplished the above tasks.   (3 marks)

(d)   Capture a screenshot(s) to show how you would execute the following tasks:

    (i)   Display all the programs that load automatically when the computer is started.   (3 marks)

    (ii)   Configure the device installation settings to automatically download manufacturer's apps and custom icons available for your devices.   (3 marks)

    Capture and save a screenshot showing the above configurations.

(e)   In the course of using your computer, you have realised that your hard disk space is becoming low. You would wish to run a disk clean up continuation to create more storage space by deleting the following items:

    •   Temporary internet files.
    •   Offline web pages.
    •   Recycle bin.
    •   Temporary files.

    Capture screenshots showing the steps you would follow to accomplish the above task.   (4 marks)

Print Question Five document.

(Total: 20 marks)

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