

Operating Systems ST1

Total points 0/0 ?

Attempt ALL 5 questions. Each question carries 3 marks.

Write each answer as a single paragraph. Do not press "Enter" while writing an answer.

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Section *

- ☒ COE I
- ☐ COE II
- ☐ COE III
- ☐ CSAI
- ☐ MAC



Q1. Define an operating system. (Write a technical definition in your own words without copying from any book, notes or website.)

Operating system is a piece of software that manages all the resources of a computer system, both hardware and software. It provides interface between user and hardware .It provides an environment in which the user can execute his programs in a convenient & efficient manner.

Q2. What should be the design goals while designing an operating system for smartphones?

- 1.convenience
- 2.proper resource allocation / efficiency
- 3.memory management
- 4.security
- 5.easy to use

Q3. What is a microkernel?

It is the most reduced amount of software that can provide the mechanisms needed to implement an operating system . All the non essential components of kernel is discarded and are implemented as user level program .

It provides minimal services of process and memory management.Its primary aim is to provide communication between client program and services in user space.

Q4. Name any three system calls and explain what they do.

1. fork() :this system call is used for creating a new process(child process) which runs parallelly with the process that makes the fork() call (parent process).
- 2.open() : open() system call is used to provide access to a file and open it. it allocates required resources to the file and give the process a handle to refer the file.
- 3.wait() : it blocks the calling process until one of its child processes exits or a signal is received. After child process terminates, parent continues its execution after wait system call instruction.



Q5. "GUIs helped in making computers accessible to the masses." Justify the statement.

The graphical user interface (GUI) is a form of user interface which allow user to interact with electronic devices through graphical icons instead of text,

The visual interface is one of the key feature which made it easy to use , people find it more convinient and easy to use . GUIs are used in many handheld mobile devices , computers, Its goal is to enhance the efficiency and ease of use for the underlying logical design of a stored program, so lot of powerful things can be done in a miniature system at a low cost , mass production , hence it is easy to use and has been populated among the common people

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