
Monash University

Semester Two 2020 – Mini Sample Test

Faculty of Information Technology

EXAM CODES: **FIT 2100**

TITLE OF PAPER: **OPERATING SYSTEMS**

EXAM DURATION: 25 minutes

THIS PAPER IS FOR STUDENTS STUDYING AT:(tick where applicable)

☐ Berwick	✔ Clayton	✔ Malaysia	☐ Off Campus Learning	
☐ Caulfield	☐ Gippsland	☐ Peninsula	☐ Enhancement Studies	☐ Sth Africa
☐ Pharmacy	☐ Other (specify)			

PART A

- **Each question is worth 1 mark and has TWO correct answers. Choose the correct answers ONLY.**
- **0.5 marks will be awarded for each of the correct answers. However NO mark will be awarded if one or more of the answers to the question is wrong, or the question is not answered.**
- **To get the best possible mark you should only choose answers you are sure are correct. Never choose an answer if you are not sure because it might be an incorrect answer. Do not attempt to guess answers as you might lose all marks for that question.**
- **Total marks for this part is 3**

Q1: Which of the following are true of processes? **(0.5+0.5=1 mark)**

A: A process only exists when the processor is actively running the corresponding program.

B: A process can exist even when it is not currently running in the processor.

C: A process in the 'ready' state may not be in main memory

D: A process must be in main memory to be in the 'running' state.

E: When a process is 'suspended,' its process control block (PCB) is taken out of main memory.

Q2: Which of the following statements are true about 'kernel mode' execution? **(0.5+0.5=1 mark)**

A: Kernel mode allows any process to override file system permissions.

B: Kernel mode permits access to any addressable memory on a system.

C: Kernel mode permits execution of special instructions that are not allowed under 'user mode'.

D: A program must run in kernel mode to access or modify another program's files on disk.

E: Kernel mode permits the installation of operating system updates.

Q3: Disk scheduling typically involves… **(0.5+0.5=1 mark)**

A: Allocating disk space to users in a fair manner.

B: Removing internal fragmentation so disk space can be used efficiently.

C: Examining disk requests to determine the most efficient order in which to service the requests.

D: Re-ordering disk requests to minimise overall seek time.

E: Ensuring files are allocated in contiguous blocks.

PART B

- **Answer all the questions in the space provided below the question**
- **The marks for each question as indicated at the end of the question**
- **The total number of marks for this part is 2.**

Q1: This question is about disk scheduling algorithms. Identify an advantage of SCAN as compared to SSTF. **(2 marks)**

END OF TEST

Note: This test is a *mini* sample version of the mid-semester test.
Solutions to this sample paper will not be provided.
The real test will be twice as long (6 MCQs in part A and 2 short answer questions in Part B). The test duration will be 45 minutes. The total marks for the mid semester test is 10.