



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

SECR2043-07 OPERATING SYSTEMS

EXERCISE 3

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Odd number matric card – 3.1, 3.3, 3.5

3.1 Using the program show in Figure 3.30, explain what the output will be at LINE A.

The function fork() creates new process that is copying the original process, and has its own memory and own copy of all variables. In the child process, the pid value is 0, and then adds to 15 and exits 0.

In the parent process, the value is 5 from the declaration on the top of the program. The value is greater than 0 then will exits with the output PARENT: value = 5.

3.3 Original versions of Apple's mobile iOS operating system provided no means of concurrent processing. Discuss three major complications that concurrent processing adds to an operating system.

- **System resource allocation and usage**
- **Overuse of memory and othe resources**
- **Competition for the limited resources**

3.5 When a process creates a new process using the fork() operation, which of the following states is shared between the parent process and the child process?

- a) Stack
- b) Heap
- c) Shared memory segments

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