

Military College of Signals

Mid Term Exams

BESE-15 (A&B)

CPS-410: Operating Systems

Instructor
Dr. Hammad Afzal

Time: 90 Mins
Max Points: 30

Note:

- Be precise and avoid un-necessary details.
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Part 1 (15)

- Q1: Explain interrupts and traps, and provide a detailed account of the procedure that an operating system handles an interrupt. [5]
- Q2: What is a context? Provide a detail description of all activities of a context switch. [5]
- Q3: Explain the concept of Dual-Mode, elaborating the differences between modes. [3]
- Q4: Organize the following concepts in order of (i) increase in Size, (ii) Access Time.
Cache, Registers, Disk Storage, Main Memory [2]
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Part 2 (15)

- Q5: What are the two approaches to implement commands (in context of Command Line Interpreters (CLI)). Also highlight the impact of the two approaches on the size of CLI [3]
- Q6: What are the methods to pass parameters to the Operating System during System Call? [2]
- Q7: List any 6 of the attributes that an operating system maintains to keep track of information about a process (Only names are required). [2]
- Q8: In the context of Process State Diagram, explain the transition from "Waiting" to "Suspend" and "Suspend to Ready". Note: You can go into the further detailed division of Suspended state. [3]
- Q9: Briefly describe the "Long term Scheduling" and "Short Term Scheduling". Which scheduling is not performed in modern Microsoft Windows based OS and why? [3]
- Q10: Elaborate the difference between Single and Multi threaded processes in terms of the constituents of Process Control Block. (only draw diagram) [2]
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