### Bingham University, Karu

# Faculty of Science and Technology

#### Department of Computer Science

#### First Semester Exams 2018/2019 Session

Course Code: CMP 211 EXAMS. Course Title: Operating Systems

Time Allowed: 2hrs. Instructions: (Answer Question 1 and 3 others)

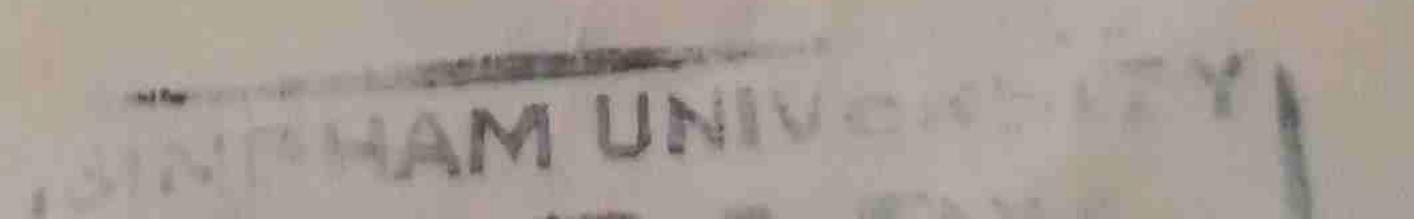
- -1. John has started a game on his laptop:
- a) Explain the steps required for the program to run from starting the system.
- b) After playing for 30mins he realises that the system is slowing down and eventually returns an error message.

What causes a message to be returned?

- c) What are possible causes and solutions to the problem explaining your answer?
- 2. a) Differentiate between a program and a process explaining both.
  - b) What activities is the operating system responsible for in memory management
  - c) When do we say a real time system is functioning correctly and contrast it with a time-sharing system?
- 3. a) Explain distributed systems
  - b) Why are memory controllers necessary?
  - c) How and why are interrupts handled quickly?
- 4. a) What do the load and store instructions achieve in memory management
  - b) Discuss fault tolerance and graceful degradation.
  - c) Explain symmetric and asymmetric clustering
- 5. a) How is the operating system protected from multiple errors in multiprogramming?
  - b) Explain privileged instructions in dual mode operations.
  - c) What are the functions of systems calls in operating systems?
- 6. a)From memory management, how are programs executed
  - b) What are the operating systems responsibilities?
  - c) Explain real time embedded systems and how we know when they are functioning correctly.

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#### Faculty of Science and Technology

Department of Computer Science

First Semester Exams 2016/2017 Session

Course Code: CMP 211 EXAMS. Course Title: Operating Systems

Time Allowed: 2hrs. Instructions: (Answer Any Four Question within 4 Lines)

# 1. a. How are modes of operating systems separated?

- b. Discuss asymmetric multiprocessing?
- c. In a clustered system, distinguish between non-multiprogrammed systems and multiprogrammed systems.
- 2. a. When do we use virtual memory?
  - b. Discuss CPU scheduling.
  - c. Discuss Batch systems.
- 3. a. What do the load and store instructions achieve in memory management
  - b. Discuss fault tolerance and graceful degradation.
  - c. Explain symmetric and asymmetric clustering
- 4. a. How are modes of operating systems separated?
  - b. Discuss asymmetric multiprocessing?
  - c. In a clustered system, distinguish between non-multiprogrammed systems and multiprogrammed systems
- 5. a. How do we synchronize access to shared memory?
  - b. What are the aspects of the computer system that the bootstrap initialises?

c. How is an interrupt routine called??

Da How is the operating system profected evers in multipagramming ? b Explain probledged Instruction in dual mode operation in the function of 34stern Call in operations 34stern 2

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