

**FACULTY OF INFORMATICS**  
**M.C.A. (CBCS) II-Semester (Backlog) (2019-2020 Batch) (New)**  
**Examination, April 2022**  
**Subject: Operating System**

**Time: 3 Hours**

**Max. Marks: 70**

**(Missing data, if any, may be suitably assumed)**

**Note: Answer any five questions from the following.**  
**All questions carry equal marks.**

- 1 a) Write about layered approach.  
b) Describe the process control block.
- 2 a) Explain many-to-many models of threads.  
b) Give an overview of safe state.
- 3 a) Write notes on memory protection.  
b) Elaborate on segmentation hardware.
- 4 a) Discuss the basic method of paging.  
b) Explain the need for page replacement.
- 5 a) List out and define file operations.  
b) Explain contiguous allocation.
- 6 a) Discuss mass storage structure.  
b) Explain about the I/O hardware.
- 7 a) Describe the domain structure.  
b) Discuss access matrix with owner rights.
- 8 a) Write notes on trojan horse.  
b) Describe symmetric encryption.
- 9 a) Explain about module management in linux system.  
b) Describe the process identity in linux.
- 10 a) Discuss threads and scheduling in windows 7.  
b) Explain NTFS metadata.

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