

**M. SC. (COMPUTER SCIENCE) SEM – III (CHOICE BASED  
CREDIT & GRADE SYSTEM) : WINTER - 2017  
SUBJECT : ELECTIVE : c) ADVANCED OPERATING SYSTEM**

Day : **Friday**  
Date : **10/11/2017**

Time : **03.00 PM TO 06.00 PM**  
Max. Marks : 60

**W-2017-0833**

**N. B. :**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labelled diagram **WHEREVER** necessary.

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**Q. 1** Describe the file organization with their types and operations. **(15)**

**OR**

What is the page replacement? Explain with proper Algorithms.

**Q. 2** A) Answer **ANY ONE** of the following: **(08)**

- i) Explain the different methods for handling deadlocks.
- ii) Illustrate FIFO (First In First Out) and SJF (Shortest Job First) scheduling algorithm with proper example.

**B)** Answer **ANY ONE** of the following: **(07)**

- i) Describe different types of directory.
- ii) Explain various functions of operating system.

**Q. 3** Answer **ANY THREE** of the following: **(15)**

- a) Write a note on RPC clusters.
- b) Write a note on network file system.
- c) Explain virtual memory.
- d) Describe structure of Process Control Block in detail.
- e) Explain the I/O devices.

**Q. 4** Write short notes on **ANY THREE** of the following: **(15)**

- a) Client/Server Computing
- b) Malicious Software
- c) Threads
- d) Linux File System
- e) TCP / IP

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