DATE: 15-4-19

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**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU-27**

**II Semester Examination, April 2019**

**B C A**

**CA 2315: Operating Systems**

**Time 2.5 Hrs Max Marks 70**

**Supplementary candidates only.**

**Attach the question paper with the answer booklet**

**This paper contains 1 printed page and 3 parts**

**PART-A**

**Answer all TEN questions 2 x10 = 20**

1. Write a note on buffering. Give its applications.
2. What are the two kinds of real time systems? Give examples.
3. Explain the concept of semaphores.
4. What is PCB?
5. Briefly explain internal fragmentation.
6. What are the necessary conditions for a deadlock to occur?
7. Why is demand paging needed?
8. What is contiguous allocation method in allocating space for a file?
9. Explain the concept of overlaying.
10. List the different file access methods.

**PART-B**

**Answer any FIVE questions 6 x5 = 30**

1. Discuss different types of system calls.
2. Explain the services by an operating system.
3. Discuss CPU Scheduling criteria.
4. Discuss LRU and FIFO page replacement algorithms with examples.
5. Explain the steps to handle a page fault in demand paging.
6. Explain SCAN and CSCAN disk scheduling algorithms with suitable examples.
7. Explain free space management in operating system.

**PART-C**

**Answer any TWO questions 10 x2 = 20**

1. Explain in detail the various system components in an operating system.
2. Discuss different CPU scheduling algorithms with examples.
3. Explain directory structure.

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