DATE: 24-04-2017

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

**II Semester Examination, April 2017**

**B C A**

**CA 2315: Operating Systems**

**Time 2.5 Hrs Max Marks 70**

**This paper contains 2 printed pages and 3 parts**

**(*For supplementary candidates of 2015 batch only)***

***Attach this question paper with the answer script***

**PART-A**

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

1. Write a note on micro programs.
2. What are the primary and secondary goals of an operating system?
3. Explain the concept of spooling.
4. Differentiate a program from a process.
5. Briefly explain context switching.
6. Define throughput, turnaround time, response time with respect to process management.
7. What do you mean by the term ‘ageing’ in scheduling? How is it overcome?
8. Mention any three conditions necessary for deadlocks.
9. What are the functions of memory management?
10. List the operations that can be performed on files.

**PART-B**

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

1. Compare and contrast the real time operating systems from time sharing operating systems.
2. Write a note on system calls.
3. What is the use of the PCB? Explain with suitable illustrations.
4. Write a detailed note on schedulers.
5. Explain the concept of demand paging.
6. Explain the LRU page replacement algorithm in detail.
7. Explain the tree structured and acyclic graph directories.

**PART-C**

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

1. Explain in detail the services provided by the operating system.
2. What is a deadlock? With a resource allocation graph explain deadlock detection.
3. Explain SSTF and SCAN disk scheduling algorithms with suitable examples.

CA-2315-A-17