B.C.A. DEGREE EXAMINATION,APRIL 2019
III Year V Semester
Operating Systems

Time : 3 Hours **Max.marks :75**

Section A $(10 \times 2 = 20)$ Marks

Answer any **TEN** questions

1. List out the three multithreading models.
2. Mention the five scheduling criteria.
3. Define safe state.
4. Name the four conditions in deadlock.
5. Give the advantage of dynamic loading.
6. What is paging?
7. What is the difference between shared lock and exclusive lock?
8. What are the major methods of allocating disk space?
9. Define maskable and non maskable interrupt.
10. Write any four program threats.
11. State symmetric and asymmetric encryption.
12. Define process?

Section B $(5 \times 5 = 25)$ Marks

Answer any **FIVE** questions

13. Explain the interproccess communication with neat sketch.
14. Discuss the causes for deadlock? How they are detected and prevented?
15. Draw the diagram of segmentation memory management scheme and explain its principle.
16. Establish the types of access in file protection.
17. Discuss the lifecycle of an I/O request with neat diagram.
18. Compare single thread with multi thread.
19. Describe semaphore. How this is used in synchronization issues?

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. Why CPU scheduling is important? Explain any three scheduling algorithms.
21. Write a short notes on
    a) Bounded-buffer problem b)Dining-Philosophers problem.
22. Distinguish external fragmentation and internal fragmentation. How to solve the fragmentation problem using paging.
23. Summarize the file attributes and file opertations.
24. Discuss the security problems in operation system.

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