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## SIXTH SEMESTER B.A./B.Sc. DEGREE EXAMINATION, MARCH 2020

(CUCBCSS—UG)

BCA

### BCA 6B 15—OPERATING SYSTEMS

(2014 Admissions)

Time: Three Hours

Maximum: 80 Marks

#### Part A

Answer all questions.

Each question carries 1 mark.

- 1. A program in execution is called ———.
- 2. Name the types of schedulers for processes in operating system.
- 3. In an interactive system, the time between submissions of a new process request and the commencement of its execution is known as ———.
- 4. Maintaining separate process queues serviced by different schedulers is called ———— scheduling.
- 5. Name two forms of memory partitioning.
- 6. ——— is a method to overcome external fragmentation.
- 7. In memory management TLB stands for ———.
- 8. In paging, PMT stands for ———
- 9. —— is the time it takes to rotate DASD until requested record is under read/write head.
- 10. DMA stands for -----

 $(10 \times 1 = 10 \text{ marks})$ 

#### Part B

Answer all questions.

Each question carries 2 marks.

- 11. What are the advantages of multiprogramming?
- 12. What do you mean by running state of a process?
- 13. What is non-preemptive scheduling?

Turn over

- 14. What is a deadlock?
- 15. What do you mean by contiguous memory management?

 $(5 \times 2 = 10 \text{ marks})$ 

#### Part C

## Answer any five questions. Each question carries 4 marks.

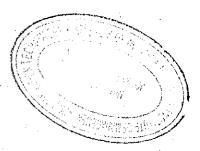
- 16. What are the functions of an operating system?
- 17. Differentiate pre-emptive and co-operative multitasking.
- 18. What are real-time systems?
- 19. What are the objectives of a good scheduling policy?
- 20. Mention the methods available for deadlock recovery.
- 21. Differentiate static binding and dynamic binding in memory management.
- 22. Explain the page replacement policies.
- 23. Explain Direct Access Storage Device (DASD).

 $(5 \times 4 = 20 \text{ marks})$ 

#### Part D

# Answer any five questions. Each question carries 8 marks.

- 24 Explain batch operating systems.
- 25. Explain the concept of long-term scheduler.
- 26. Explain Shortest Job First (SJF) scheduling.
- 27. Explain the necessary and sufficient conditions for a dead lock to occur.
- 28. Explain Banker's algorithm for deadlock avoidance.
- 29. Explain the concept of segmentation.
- 30. Explain the working of virtual memory.
- 31. Explain the concept of disk scheduling.



 $(5 \times 8 = 40 \text{ marks})$