

III Semester B.C.A. Degree Examination, Nov./Dec. 2016
(Scheme (CBCS)) (F+R)
(2015 – 16 & Onwards)
COMPUTER SCIENCE
BCA – 305 : Operating Systems

Time : 3 Hours

Max. Marks : 100

Instruction : Answer all Sections.

SECTION – A

Answer any ten questions.

(10×2=20)

1. What is an operating system ? Mention any two functions of an O.S.
2. Define time sharing systems.
3. What is aging ?
4. What is monitor ?
5. Define deadlock with an example.
6. Define compaction.
7. Define virtual memory.
8. Mention any four attributes of file.
9. What is a bit vector ?
10. Define seek time.
11. What is worm ?
12. Define logical and physical address.

SECTION – B

Answer any five questions.

(5×5=25)

13. Explain states of a process with neat diagram.
14. Explain multi-programming system. Mention its advantages.
15. Explain the Critical-section problem.
16. Explain the Resource-Allocation graph.

P.T.O.



17. Compare first-fit, best-fit and worst-fit allocation of memory.
18. Describe the frame allocation algorithms.
19. Explain linked allocation method.
20. List any three goals of protection.

SECTION – C

Answer **any three** questions.

(3×15=45)

21. a) Explain FCFS scheduling algorithm with an example and a Gantt chart. 8
- b) Explain the different types of schedulers. 7
22. a) Explain Banker's algorithm. 8
- b) Explain different methods of deadlock prevention. 7
23. a) Explain any two page replacement algorithm with an example. 8
- b) Differentiate between paging and segmentation. 7
24. a) Explain different file accessing methods. 8
- b) Explain single level and two level directory. 7
25. a) Explain any three disk scheduling algorithms with examples. 9
- b) Discuss about the different types of viruses. 6

SECTION – D

Answer **any one**.

(1×10=10)

26. Write short notes on :
 - a) PCB. 5
 - b) Semaphore. 5
27. Write short notes on :
 - a) Overlays. 5
 - b) Dining-philosophers problem. 5