(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. (10x2=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.
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. (5x5=25)

13. Explain states of a process with neat diagram.
15. Explain the Critical-section problem.

P.T.O.
18. Describe the frame allocation algorithms.
19. Explain linked allocation method.
20. List any three goals of protection.

SECTION - C

Answer any three questions. (3x15=45)

21. a) Explain FCFS scheduling algorithm with an example and a Gantt chart.
    b) Explain the different types of schedulers.

22. a) Explain Banker's algorithm.
    b) Explain different methods of deadlock prevention.

23. a) Explain any two page replacement algorithm with an example.
    b) Differentiate between paging and segmentation.

24. a) Explain different file accessing methods.
    b) Explain single level and two level directory.

25. a) Explain any three disk scheduling algorithms with examples.
    b) Discuss about the different types of viruses.

SECTION - D

Answer any one. (1x10=10)

26. Write short notes on:
    a) PCB.
    b) Semaphore.

27. Write short notes on:
    a) Overlays.
    b) Dining-philosophers problem.