NS – 619

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III Semester B.C.A. Degree Examination, November/December 2016
(Y2K8 Scheme) (Repeaters)
Computer Science
BCA – 304 : OPERATING SYSTEMS

Time : 3 Hours

Max. Marks : 90/100

Instructions : *i) Answer **all** Sections.*
*ii) Section **D** is applicable only to students who have taken admission in **2011 – 12** and onwards.*

SECTION – A

Answer **any ten** questions. **(10×2=20)**

1. Define operating system.
2. Explain spooling.
3. Define scheduler.
4. Define critical section.
5. What is a deadlock ? Give an example.
6. Explain Deadlock prevention.
7. Explain TLB.
8. What are overlays ?
9. Define locality.
10. What is paging ?
11. Mention the attributes of file.
12. Write any two Anti-virus softwares.

SECTION – B

Answer **any five** questions. **(5×5=25)**

13. Explain multiprogramming system.
14. Explain the different states of a process.

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15. Explain the characteristics of Deadlock.
16. Explain segmentation in detail.
17. Explain thrashing and its causes.
18. Explain the Directory structure.
19. Explain free space management.
20. Explain the structure of hard disk.

SECTION – C

Answer **any three** questions. **(3×15=45)**

21. a) Explain FCFS CPU scheduling algorithm with example. **8**
    b) Differentiate pre-emptive and non premptive scheduling. **7**
22. a) Explain the services of operating system. **8**
    b) Explain semaphores and its operations. **7**
23. a) Explain Deadlock detection algorithms. **8**
    b) Explain the process of Recovery from Deadlock. **7**
24. a) Differentiate paging and segmentation. **8**
    b) Explain contiguous memory allocation. **7**
25. a) Explain types of Fragmentation. **8**
    b) Explain in brief different page replacement algorithms. **7**

SECTION – D

Answer **any one** question. **(1×10=10)**

26. Write short notes on :
    a) SCAN Disk scheduling
    b) Virtual memory.
27. Write short notes on :
    a) File protection methods
    b) Types of Virus.