



**2021/TDC/CBCS/ODD/
BCACC-302T/018**

**TDC (CBCS) Odd Semester Exam., 2021
held in March, 2022**

COMPUTER APPLICATION

(3rd Semester)

Course No. : BCACC-302T

(Operating System)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

SECTION—A

Answer any ten questions : 2×10=20

1. Define OS. Give an example of single-user OS.
2. What is multithreading? Write the advantages of multithreading.



(3)

SECTION—B

Answer any five questions :

6×5=30

16. What is process? With a neat diagram, explain the life cycle of a process. 1+5=6
17. What are the different modes of operation of operating system? Explain briefly. 6
18. What is paging? Why is paging necessary in OS? Explain the working principle of paging. 1+1+4=6
19. Explain the following : 3×2=6
 - (a) Swapping
 - (b) Virtual memory
20. Explain the following disk scheduling algorithms : 3×2=6
 - (a) FCFS
 - (b) SSTF
21. Explain DMA controller with block diagram. 6
22. What are file access methods? Explain these briefly. 6

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(Turn Over)

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3. Write the importance of system calls.
4. Distinguish between internal and external fragmentations.
5. What is segmentation?
6. How does best fit memory allocation work?
7. What is device management of operating system?
8. In what way software clock differs from hardware clock?
9. Why is interrupt mechanism important in OS?
10. Write the different attributes of a file.
11. Why is OS security important?
12. What is mounting of file system?
13. What is critical section problem?
14. How can a deadlock be avoided?
15. Define semaphore. What are its two atomic operations?

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(Continued)



(4)

- 23.** Discuss about different file allocation methods. 6
- 24.** Explain how interprocess communication takes place between two processes. 6
- 25.** What is deadlock? Explain the necessary conditions for its occurrence. 6
