



**2019/TDC/ODD/SEM/
BCACC-302T/149**

TDC (CBCS) Odd Semester Exam., 2019

COMPUTER APPLICATION

(3rd Semester)

Course No. : BCACC-302T

(Operating System)

Full Marks : 70

Pass Marks : 28

Time : 3 hours

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

UNIT—I

1. Answer any *two* of the following questions :

2×2=4

- (a) What is an Operating System? Give the view of an OS, a resource manager.
- (b) What is kernel? State two differences between batch operating system and multiprogramming operating system.
- (c) What are process creation and process termination?

(2)



<http://www.elearninginfo.in>

(3)

2. Answer any *one* of the following questions : 10

- (a) Define process. With a neat diagram, explain the work of process state transition diagram. Define PCB.
- (b) Discuss the storage structure of a computer system.

UNIT—II

3. Answer any *two* of the following questions : 2×2=4

- (a) Define a thread. How is it differ from a process?
- (b) State two concepts of scheduling.
- (c) Define the concept of process management.

4. Answer any *one* of the following questions : 10

- (a) State two differences between preemptive and non-preemptive scheduling. Explain the objectives of scheduling.
- (b) With an example, discuss briefly—
 - (i) FIFO Scheduling Algorithm;
 - (ii) RR Scheduling Algorithm.

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UNIT—III

5. Define any *two* concepts of the following : 2×2=4

- (a) Synchronization
- (b) Concurrent processes
- (c) Critical section

6. Answer any *one* of the following questions : 10

- (a) Define the concept of deadlock. State deadlock conditions. Discuss briefly the methods for handling deadlocks.
- (b) With an example, discuss briefly the Banker's algorithm for multiple resources.

UNIT—IV

7. Answer any *two* of the following questions : 2×2=4

- (a) What is the difference between a physical address and a virtual address?
- (b) Define the concept of paging.
- (c) Define the concept of segmentation.

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(Turn Over)



8. Answer any *one* of the following questions : 10

- (a) Explain the following various contiguous memory allocations :
 - (i) Single partition
 - (ii) Multiple partitions
 - (iii) Partition selection algorithms
- (b) Explain the following various non-contiguous memory allocations :
 - (i) Paging
 - (ii) Segmentation
 - (iii) Segmentation with paging

UNIT—V

9. Answer any *two* of the following questions : 2×2=4

- (a) Define the basic concept of files. State some common file attributes in OS (Operating System).
- (b) Differentiate between Sequential access and Direct access.
- (c) State two necessities of storing data on secondary storage devices.

10. Answer any *one* of the following questions : 10

- (a) Define directory structure. Explain in brief various file operations.
- (b) Discuss in brief various mechanisms of authentication for internal access authorization.
