

Dr. Babasaheb Ambedkar Open University
Term End Examination July – 2026

Course	: BCA / DCA	Date	: 16/07/2026
Subject Code	: BCAR-102 / DCAR-102	Time	: 11.30 am to 1.45pm
Subject Name	: Operating System & Software Installation	Duration	: 02.15 hours
		Max. Marks	: 70

Section A

Answer the following (Attempt any three) (30)

1. What is Operating System? Explain General Categories of Operating System.
2. Explain services of operating system in details.
3. What is process? Explain process states and life cycle of a process.
4. Explain paging in details.
5. Explain different file operations.

Section B

Answer the following (Attempt any four) (20)

1. List New Features of Windows 10.
2. What is Mutual Exclusion? List basic requirements that should be met while implementing mutual exclusion.
3. Write short note on First-Come First-Served (FCFS) CPU Scheduling.
4. Explain Resource-Allocation (R-A) Graph with suitable example.
5. Explain any one of the page replacement algorithms.
6. Write short note on System Security Attacks.

Section C

Part – A (Multiple Choice Questions) (10)

- 1 Which software acts as an interface between computer hardware and application programs?
A Compiler B Assembler
C Operating System D BIOS
- 2 Which operating system type guarantees that critical tasks finish within specified deadlines?
A Batch OS B Hard Real-Time OS
C Time Sharing OS D Distributed OS
- 3 Which operating system structure provides excellent modularity by arranging services into layers?
A Monolithic B Exokernel
C Virtual Machine D Layered
- 4 Which user interface requires users to type commands?
A CLI B GUI
C API D Shell Script

- 5 Which scheduling algorithm selects the process having the minimum execution time?
A FCFS B SJF
C FIFO D Priority
- 6 Which memory management technique divides memory into fixed-size pages?
A Segmentation B Swapping
C Paging D Partitioning
- 7 Which disk scheduling algorithm services requests strictly in arrival order?
A FCFS B LOOK
C SSTF D SCAN
- 8 Which file allocation method stores a file in consecutive disk blocks?
A Indexed Allocation B Linked Allocation
C Dynamic Allocation D Contiguous Allocation
- 9 Which Windows version introduced the Microsoft Edge browser?
A Windows 7 B Windows Vista
C Windows 8 D Windows 10
- 10 Which installation method completely removes the previous operating system before installing Windows?
A Upgrade Installation B Clean Installation
C Express Installation D Repair Installation

Part – B (Do as Directed)

(10)

State whether the following statements are true or false

- 1 Serial processing allows multiple users to execute programs simultaneously.
- 2 Distributed operating systems provide resource sharing among multiple computers.
- 3 Virtual machines can run different operating systems on the same physical machine.
- 4 Application Program Interfaces (APIs) hide operating system implementation details from programmers.
- 5 Context switching occurs when the CPU changes execution from one process to another.
- 6 Threads belonging to the same process cannot share memory.
- 7 Segmentation divides memory into equal-sized fixed blocks.
- 8 The Optimal Page Replacement Algorithm always replaces the page that will not be used for the longest future time.
- 9 Microsoft Edge was introduced before Internet Explorer.
- 10 Installing Microsoft Office is considered application software installation rather than operating system installation.
