

QP CODE

Enrollment Number:

B1022

Name:

BCA DEGREE EXAMINATIONS, APRIL 2025
Second Semester
Bachelor of Computer Applications
B21CA03DC – Computer Architecture and Operating Systems
(2024 January Admissions)

Time: 3 Hours

Max Marks: 70

Section A

Answer any ten of the following questions in a word or sentence each. Each question carries 1 mark.

1. What is used for synchronization of digital devices?
2. How many timing signals could be generated by a 4 bit sequence counter?
3. What does RTL stand for?
4. What is the usual BUS structure used to connect the I/O devices?
5. What is Vector processing?
6. What is booting?
7. What is Mutual exclusion?
8. What are the disadvantages of contiguous memory allocation?
9. DMA stands for
10. What do you mean by pipelining?
11. Memory units stores and
12. What is a subroutine?
13. What is Page fault?
14. Expansion of ASCII is
15. What is Swapping?

(1X10=10)

Section B

Answer any five of the following questions in two or three sentences each. Each question carries 2 marks.

16. Explain unconditional branch instructions.

17. Explain priority interrupt
18. Mention different types of OS.
19. Explain different bus types.
20. What is the use of decoder?
21. What is a registers and mention the use of registers?
22. Mention the types of program control instructions.
23. What is polling?
24. Difference between parallel and serial computing.
25. What do you mean by deadlock?

(2X5=10)

Section C

Answer any five of the following questions in a paragraph each. Each question carries 4marks.

26. What is the need for addressing mode in computer architecture?
27. Compare priority vs non-priority scheduling
28. Explain different inter process communications.
29. Discuss banker's algorithm.
30. Explain the layered structure of the operating system.
31. Difference between a process and a program.
32. Explain the Performance Measures of Vector Processing.
33. Mention the functions of IO interface.
34. Explain the generations of computers.
35. Explain types of interrupts.

(4X5=20)

Section D

Answer any two of the following questions in three pages each. Each question carries 15 marks.

36. Explain different addressing modes with examples.
37. Explain the concept of Direct Memory Access (DMA). Discuss the advantages of using DMA in a computer system.
38. Explain Flynn's computer system classification with examples.
39. Explain the process state diagram.

(15X2=30)