D 132381 **(Pages : 2)** **Name.....**

Reg. No.....

FIRST SEMESTER (CUFYUGP) DEGREE EXAMINATION, NOVEMBER 2025

Computer Application

BCA1CJ101—FUNDAMENTALS OF COMPUTERS AND COMPUTATIONAL THINKING

(2024 Admission onwards)

Time : Two Hours Maximum : 70 Marks

Section A

Answer **all**.
Each question carries 3 marks.
(Ceiling 24 Marks)

1. Explain the concept of the Von Neumann architecture.
2. What is grey code ?
3. What are the basic functions of a capacitor ?
4. What is the purpose cf a CPU cooling fan on a motherboard ?
5. Differentiate DRAM and SRAM.
6. Define an operating system and explain its function.
7. What is the function of a boot manager?
8. What is the role of Computer Science in the modern era ?
9. Differentiate between inductive and deductive reasoning in logical thinking.
10. Explain the qualities of good algorithm.

(Ceiling 24 Marks)

Section B

Answer all.
Each question carries 6 marks.
(Ceiling 36 marks)

11. Explain the evolutions of computers.
12. Compare Single-Core, Dual-Core, and Multi-Core processors and their importance in modern computing.
13. Explain the differences between active and passive electronic components with examples.

Turn over

14. Explain the different ports available in motherboard.

15. Differentiate system software and application software.

16. Explain disk partitioning and dual booting.

17. Explain systematic approach in problem solving.

18. Differentiate abstraction and generalization in computational thinking.

(Ceiling 36 marks)

Section C

Answer any **one**.
The question carries 10 marks.

19. Explain in detail the components of a motherboard.

20. Describe the various file system used in operating systems and how they affect storage management.

(1 × 10 = 10 marks)