D 112277   (Pages : 2)   Name..

Reg. No....................................

FIRST SEMESTER (CUFYUGP) DEGREE EXAMINATION
NOVEMBER 2024

Computer Application

BCA 1CJ 101—FUNDAMENTALS OF COMPUTERS AND COMPUTATIONAL THINKING

(2024 Admission onwards)

Time : Two Hours   Maximum : 70 Marks

Section A

Answer **all** *questions.*
Each question carries 3 *marks.*
Ceiling 24 *marks.*

1. Convert the binary number 101101 to its decimal, octal and hexadecimal equivalent.

2. Describe the key features of first-generation computers.

3. Define a diode and explain its function in electronic circuits.

4. Mention the uses of expansion slots in motherboard.

5. Define ROM and its role in a computer system.

6. What is the difference between system software and application software ?

7. What is Booting ?

8. Define problem-solving and its significance.

9. Explain Intuition *vs* Precision.

10. What is the use of Raptor ?

Section B

Answer **all** *questions.*
Each question carries 6 *marks.*
Ceiling 36 *marks.*

11. Explain the role of John Mauchly and J. Presper Eckert in the development of computing systems.

12. Explain Gray code and Excess-3 code with example.

Turn over

13. Discuss the different types of RAM.

14. Explain the different storage devices available on motherboard.

15. What is operating system ? Explain types of operating system.

16. What are device drivers ? Explain its need.

17. Discuss the role of computer science in modern era.

18. What is the difference between inductive and deductive reasoning ? Provide an example of each.

Section C

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

19. Explain the passive electronic components with definition, symbol and function.

20. Describe the need for algorithms in modern problem-solving, and explain the qualities that define a good algorithm with suitable examples.

(1 × 10 = 10 marks)