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(FOR THE CANDIDATES ADMITTED **20UBC414**

DURING THE ACADEMIC YEAR 2020-2023 ONLY) **REG.NO. :**

N.G.M.COLLEGE (AUTONOMOUS): POLLACHI

END-OF-SEMESTER EXAMINATIONS: JULY 2022

BCA **MAXIMUM MARKS: 70**

SEMESTER: IV **TIME: 3 HOURS**

PART - III

COMPUTER SYSTEM ARCHITECTURE

SECTION - A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS. (K1)

1. The____ code of an instruction is a group of bits.
   (a) Operation (b) Instruction (c) Source (d) Program
2. The part of the computer that performs the bulk of data processing operations is called_____.
   (a) CLU (b) CPU (c) ALU (d) RISC
3. The solution to any problem that is stated by a finite number of well-defined procedural steps is called_____.
   (a) Instructions (b) Source code (c) Algorithms (d) Flow Chart
4. Input/Output devices attached to the computers are also called ____ .
   (a) Peripheral devices (b) secondary storage devices
   (c) firmware (d) hardware driver
5. Devices that provide backup storage are called ____ memory.
   (a) Auxiliary (b) Main (c) Secondary (d) Virtual

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES (K2)

6. Define Accumulator.
7. Expand RISC
8. What is 2's Complement?
9. List the use of ASCII codes.
10. What is the advantage of bootstrap loader?

SECTION – B (5 X 4 = 20 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a) What are the different types of Instruction Codes? Explain.

(OR)

b) What are the two types of Timing and Control in computer architecture? Discuss.

12. a) Discuss Stack Organization with example.

(OR)

b) Describe the different Program Control Instructions.

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13. a) How do you perform arithmetic with floating-point numbers? Explain.

(OR)

b) Illustrate Decimal Arithmetic operations in computer architecture.

14. a) Explain Peripheral Devices in computer organization.

(OR)

b) What are different Modes of Data Transfer? Discuss.

15. a) Write short notes on Auxiliary memory.

(OR)

b) Write short notes on Virtual memory.

SECTION - C (4 X 10 = 40 MARKS)

ANSWER ANY FOUR OUT OF SIX QUESTIONS
(16th QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS (FROM Qn. No : 17 to 21)
(K4 (Or) K5)

16. Explain and briefly DMA and its types with neat diagram.

17. Illustrate Input Output Interrupts in computer architecture.

18. What is RISC? Explain RISC in computer architecture with example.

19. Explain Register Configuration in computer architecture.

20. Compare and discuss Synchronous and Asynchronous Data Transfer.

21. What are the types of Memory Management Hardware in computer architecture? Explain.

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