Reg. No.

II Semester B.C.A. (NEP) Degree Examination, October - 2022
COMPUTER SCIENCE
Computer Architecture

Time : 2½ Hours   **Maximum Marks : 60**

Instructions to Candidates:

Answer all the sections.

SECTION - A

Answer any **Four** questions out the following. Each question carries **Two** marks.(4×2=8)

1. Define computer Architecture.

2. Write the symbol and truth table for NAND gate.

3. List basic computer registers with their functions.

4. What are the three control inputs for registers?

5. Define cache memory.

6. State any two characteristics of multiprocessor.

SECTION - B

Answer any **Four** questions out of the following. Each question carries **Five** marks.

(4×5=20)

7. Explain the working of a JK flip - flop with a neat diagram.

8. Differentiate between RISC and CISC.

9. Explain DMA controller with a neat diagram.

10. What is ILP? State its limitations.

11. What is RAID? What are the advantages of using RAID technology for secondary storage?

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SECTION - C

Answer any **Four** questions out of the following. Each question carries **Eight** marks.

(4×8=32)

12. a) Simplify using K-Map

$$F(P,Q,R,S) = \sum(0,2,5,7,8,10,13,15)$$

(5)

b) Differentiate between ASCII and EBCDIC.

(3)

13. Explain 3 to 8 line Decoder.

14. With a flow chart explain the Instruction cycle.

15. Explain Logic and shift micro operations.

16. What is Paging? Explain.

17. Explain memory hierarchy in detail.

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