

B.M.S COLLEGE FOR WOMEN AUTONOMOUS
BENGALURU – 560004

END SEMESTER EXAMINATION – SEPTEMBER / OCTOBER 2022

B.C.A. - II Semester
Computer Architecture

Course Code: BCA2DSC04

Duration: 2 ½ Hours

QP Code: 2032

Max marks: 60

Instruction: Answer all the sections.

SECTION-A

Answer any TEN questions. Each question carries TWO marks

(10x2=20)

1. Convert $10111_{(2)}$ to octal number.
2. Define universal gates with logic circuit.
3. What is DEMUX?
4. Define STA instruction.
5. What are the three control inputs for registers?
6. Compare the RISC and CISC architecture.
7. Mention types of Micro operations.
8. What is register transfer with example?
9. Define Memory –Mapped I/O .
10. Distinguish between RAM and ROM.
11. Define Hit Ratio.
12. What is Thread Level parallelism?

SECTION-B

Answer any SIX questions. Each question carries FIVE Marks

(6x5=30)

13. Explain the half adder circuit with truth table.
14. Simplify the following Boolean function using k-Map.

$$F(A,B,C)=\sum m(0,1,2,3,7)$$

15. Explain 4-bit synchronous binary counter
16. Explain any five register reference instruction.

17. Write a note on the different addressing modes.
18. Explain the operation of interrupt cycle with a flow chart.
19. Explain DMA controller with a block diagram.
20. Explain memory hierarchy.

SECTION-C

Answer ONE question, carries TEN Marks

(1x10=10)

21. Explain SR and D Flip Flop in detail.
22. Explain common bus organization in basic computer.
23. Explain Handshaking Asynchronous data transfer.

BMSCW LIBRARY