

FIFTH SEMESTER B.C.A. DEGREE EXAMINATION, NOVEMBER 2016

(CUCBCSS-UG)

BCA 5B 11—COMPUTER ORGANIZATION AND ARCHITECTURE

Time : Three Hours

Maximum : 80 Marks

Part A*Answer all questions.**Each question carries 1 mark.*

1. The opcode specifies _____.
2. A collection of lines that connects several devices is called _____.
3. ADD X, Y is an example for _____ addressing mode.
4. Cache memory acts between _____ and _____.
5. MIMD stands for _____.
6. Interrupts initiated by instructions are called _____.
7. The CPU register used for ALU operation is _____.
8. A k bit field can specify _____ registers.
9. In reverse polish notation, expression $A * B + C * D$ is written as _____.
10. A stack organized computer uses instruction of _____ addressing.

(10 × 1 = 10 marks)

Part B*Answer all questions.**Each question carries 2 marks.*

11. What do you mean by stacks ?
12. Write short note on Instruction Format.
13. What is EEPROM ?
14. Define Interrupt cycle.
15. Write short note on MIMD.

(5 × 2 = 10 marks)

Turn over

Part C

*Answer any five questions.
Each question carries 4 marks.*

16. Explain the addressing modes with example.
17. Explain Booth multiplication algorithm.
18. Explain how ROM can be classified.
19. Discuss direct and set associative mapping techniques.
20. List out the basic computer registers and explain the working.
21. Explain Daisy Chaining priority interrupt.
22. Explain the use of array processor.
23. Explain Data Hazard.

(5 × 4 = 20 marks)

Part D

*Answer any five questions.
Each question carries 8 marks.*

24. Explain the functional units of computer.
25. Explain floating-point arithmetic operation.
26. Explain data transfer and manipulation instructions.
27. Discuss various memory mapping techniques.
28. Explain about DMA structure.
29. Explain vector processing in detail.
30. Explain the need and working of dynamic pipeline.
31. Explain the condition and solutions for cache coherence problem.

(5 × 8 = 40 marks)