

D 70182

(Pages : 2)

Name.....

Reg. No.....

FIFTH SEMESTER B.A./B.Sc. DEGREE EXAMINATION, NOVEMBER 2014

(CUCBCSS-UG)

B.C.A.

BCA 5B 11—COMPUTER ORGANIZATION AND ARCHITECTURE

(2014 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A

Answer all questions.

Each question carries 1 mark.

1. _____ register holds the address of the next instruction to be read from the memory after the current instruction is executed.
2. _____ memory is programmed to initiate the required sequence of micro-operations.
3. The address selection part of the micro-programmed control unit is called _____.
4. _____ register is used for manipulating the stack operations.
5. _____ is an example of conditional branch instruction.
6. The memory unit that communicates directly with the CPU is called _____.
7. The data output command causes the interface to respond by transferring data from _____ into one of its registers.
8. A _____ transmission can send and receive data in both the directions simultaneously.
9. MISD stands for _____.
10. The multiple copies of the same data can exist in different caches simultaneously is called _____.

(10 × 1 = 10 marks)

Part B

Answer all questions.

Each question carries 2 marks.

11. What are register reference instructions ?
12. What is PSW ?
13. What is bootstrap loader ?
14. Define the interrupt initiated I/O.
15. Explain the basic concept of pipeline systems.

(5 × 2 = 10 marks)

Turn over

Part C

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

16. Briefly explain the instruction cycle.
17. Discuss the memory reference instructions with example.
18. What is micro programmed control organization ? Explain.
19. Explain memory stack organization with suitable example.
20. Discuss any four addressing modes with example.
21. What is optical storage ? Explain various optical storage devices.
22. Briefly explain the handshake method of asynchronous data transfer.
23. What are clusters in parallel processing ? Explain.

(5 × 4 = 20 marks)

Part D

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

24. Explain the arithmetic logic shift unit in a computer system.
25. Explain the design of a control unit with micro-programming sequencer.
26. Discuss the general register organization with neat diagram.
27. Explain decimal arithmetic operations with example.
28. Explain RAM organization. Discuss various types of RAM chips.
29. What is Cache memory ? Explain direct mapping techniques in cache memory organization.
30. Explain Input-Output Processor (IOP) architecture with neat diagram.
31. What are instruction streams and data streams ? Compare SIMD with MIMD.

(5 × 8 = 40 marks)