FIFTH SEMESTER B.A./B.Sc. DEGREE EXAMINATION, NOVEMBER 2019

(CUCBCSS—UG)

Computer Science

BCS 5B 08—COMPUTER ORGANIZATION AND ARCHITECTURE

(2014 Admissions)

Time : Three Hours   Maximum : 80 Marks

Part A

Answer all questions.
Each question carries 1 mark.

1. Name the group of bits that instruct the computer to perform a specific operation.

2. Name the hardware implementation of a branch and save return address operation.

3. *The control function that specifies a microoperation is a binary variable.* State whether :

 True or False.

4. Name the address selection part of a microprogrammed control unit.

5. What is the concept that enables the CPU to process a number of independent programs concurrently ?

6. What are the *two* possible operating modes of integrated circuit RAM chips ?

7. Name the subsystem of a computer which provides an efficient mode of communication between the central system and outside environment.

8. Name the cheapest and slowest method of data storage.

9. Name the machine instructions where instructions are processed in a sequential manner.

10. Name the computing technology where the jobs are broken into discrete parts which can be executed concurrently.

(10 × 1 = 10 marks)

Part B

Answer all questions.
Each question carries 2 marks.

11. Differentiate direct and indirect address instruction.

12. Define Control word.

Turn over

13. Define Memory address map.

14. What are vector processors ?

15. Define baud rate.

(5 × 2 = 10 marks

Part C

Answer any five questions.
Each question carries 4 marks.

16. What are the different phases of Instruction cycle ?

17. Differentiate Instruction and Operation code.

18. What are the different memories of microprogrammed control unit ? Explain.

19. Explain three address instructions with an example.

20. Explain the two main RAM technologies.

21. Write short notes on Associative memory.

22. Explain the different classifications in Flynn's taxonomy.

23. Differentiate Magnetic Tape and Magnetic Disk.

(5 × 4 = 20 marks

Part D

Answer any five questions.
Each question carries 8 marks.

24. Explain the different memory reference instructions.

25. Explain Instruction cycle with flow chart.

26. What are the different addressing modes ? Explain.

27. Explain the different characteristics of RISC and CISC.

28. Give a detailed account on main memory.

29. Explain the organization of cache memory.

30. Briefly differentiate Isolated versus Memory-Mapped I/O.

31. Write short notes on Peripheral devices.

(5 × 8 = 40 marks