

NOVEMBER 2017

50417/SAE5C

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. What are the two major families of a computer? How it differs?
2. How can describe a computer at top level?
3. Define locality of reference.
4. What is soft error?
5. List the different kinds of recording used in magnetic tape.
6. What is the purpose of I/O command "Test"?
7. Give the drawbacks of programmed and interrupt driven I/O.
8. List out the fundamental design issues of an instruction set.
9. Give the categories of a user-visible registers.

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10. What are the two stages of an instruction cycle in RISC pipelining?
11. What is micro-operations?
12. What is the role of micro programmed control unit?

PART B — (5 × 5 = 25 marks)

Answer any FIVE questions.

13. Explain the states of an instruction cycle.
14. Discuss about associative mapping in detail.
15. Discuss the disadvantages of RAID at each level.
16. Briefly explain the design issues of an interrupt driven I/O.
17. Describe the characteristics of a machine instruction.
18. Explain the subcycles of an instruction cycle.
19. Describe the characteristics of reduced instruction set architecture.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. Explain the key characteristics of a computer memory system.
21. Briefly explain the key aspects of the semiconductor main memory.
22. Explain the different types of addressing techniques.
23. Briefly discuss the hardware approach of using larger register files.
24. Explain in detail about the basic concepts of microprogrammed control.