NOVEMBER 2014 **50417/SAE5C**

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. What are the three key concepts of Von Neumann architecture?
2. Differentiate SRAM and DRAM.
3. List the fields available in a CD-ROM block.
4. What are the elements forms a machine instruction?
5. State the two major roles performed by the registers in the processor.
6. Write the five classes of exceptions and interrupts based on priority.
7. What are the two categories of assessing merits of the RISC approach?
8. What is called hard failure?
9. Which causes an exponent overflow condition in floating point – operation?

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10. Write down the two task performed by the control unit of a processor.

11. Give the components of the control unit.

12. What are the three decisions made by control buffer register?

SECTION B — (5 × 5 = 25 marks)

Answer any FIVE questions.

13. Discuss about the bus interconnection scheme.

14. Briefly explain the memory hierarchy with a neat diagram.

15. Describe the various types of DRAM.

16. Discuss in detail about magnetic tape.

17. Explain the major functions of an I/O module.

18. Explain the six-stage CPU instruction pipeline.

19. Explain the basic concept of micro–instructions.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. Discuss in detail about peripheral component interconnect.

21. Explain the different RAID levels.

22. Explain the addition and subtraction of floating-point arithmetic.

23. Discuss the characteristics of RISC architecture in detail.

24. Explain how the concept of micro – operations serves as a guide to the design of control unit.

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