4552/SCS8S41/
SCS9S41

NOVEMBER 2013

SYSTEM SOFTWARE

(For those who joined in July 2008, 2009 and after)

Time : Three hours Maximum : 75 marks

PART A — ($10 \times 1 = 10$ marks)

Answer ALL questions.

Choose the correct answer :

1. You may have used a ———— to help detect errors in a program
   (a) linker (b) debugger
   (c) compiler (d) loader.

2. Which of the following is not a RISC based architecture?
   (a) Ultra spark (b) Power pc
   (c) VAX (d) Cray T3E.

3. Which of the following in not an assembler directive?
   (a) BYTE (b) END
   (c) RESB (d) REST.

4. The one pass load-and-go assembler does not need

(a) memory (b) data

(c) loader (d) operand.

5. _____, which modifies the object program so that it can be loaded at an address different from the location originally specified?

(a) loading (b) relocation

(c) linking (d) compiling.

6. The relocation bits are gathered together into a _____

(a) buffer (b) stack

(c) bit mask (d) queue.

7. The grammar specifies the

(a) syntax (b) semantics

(c) meaning (d) knowledge.

8. A finite automation consists of a finite set of

(a) states (b) tokens

(c) words (d) keys.

9. The user interface is concerned with

(a) input devices

(b) out put devices

(c) interaction language

(d) all the above.

10. _____ can be used to track the flow of execution logic and data modifications

(a) break points (b) trace back

(c) tracing (d) gaits.

PART B — (5 × 7 = 35 marks)

Answer ALL questions.

11. (a) Compare CISC with RISC architecture.

Or

(b) Briefly the SIC machine architecture.

12. (a) Explain the assembler algorithm.

Or

(b) Write a short note on simple SIC assembler.

13. (a) Discuss on Bootstrap loader.

Or

(b) Describe the design of an absolute loader.

14. (a) Give a brief account on grammars.

Or

(b) What is syntactic analysis? Explain.

15. (a) Discuss the debugging functions and capabilities.

Or

(b) Write a note on user interface criteria.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Describe the VAX architecture.

17. How do you design one pass assemblers? Explain.

18. Describe the features of machine dependent loader.

19. Describe the lexical analysis phase.

20. Discuss the editor structure in detail.
