SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2021
(CUCBCSS-UG)
CC17U BCS6 B16a - SYSTEM SOFTWARE
(Computer Science – Elective)
(2017 Admission - Supplementary/Improvement)

Time: Three Hours   Maximum: 80 Marks

Part A
Answer *all* questions. Each question carries 1 mark.

1. Define system software.

2. What is mean by problem-oriented language?

3. Give the prototype to use mnemonics as a parameter value in the macro.

4. Define macro.

5. What is production?

6. Distinguish between START and ORIGIN.

7. Define program relocation.

8. Define intermediate representation of a program.

9. What is the need of location counter?

10. Define overlays in a program.

$(10 \times 1 = 10 \text{ Marks})$

Part B
Answer *all* questions. Each question carries 3 marks.

11. What is mean by semantic gap in a computer system?

12. Give the format of input to LEX.

13. What are the different types of parameters in a macro definition?

14. What are the different types of assembly language statements?

15. Explain the different components in the intermediate representation.

$(5 \times 3 = 15 \text{ Marks})$

Part C
Answer any *five* questions. Each question carries 5 marks.

16. Explain the fundamental activities in language processing.

17. Define grammar. What are the different types of programming language grammars?

18. Write a note of advanced facilities used in macros.

19. Explain the procedure to handle nested macro calls.

20. What are the different ways to optimize the code?

21. Distinguish between top-down parsing and bottom-up parsing.

22. What are the different types of programs based relocatability?

23. Distinguish between program relocation and linking.

(5 × 5 = 25 Marks)

Part D

Answer any *three* questions. Each question carries 10 marks.

24. Explain the design of two-pass assembler.

25. Draw the block diagram and explain different phases in compilation.

26. What are the different steps in the design of a macro preprocessor? Explain

27. Discuss about any two language processor development tools.

28. Draw the flowchart and explain the design of an absolute loader.

(3 × 10 = 30 Marks)

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