

C 40098

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Name.....

Reg. No.....

**SIXTH SEMESTER (CUCBCSS-UG) DEGREE EXAMINATION
MARCH 2023**

Computer Science

BCS 6B 16 (A)—SYSTEM SOFTWARE

(2017–2018 Admissions)

Time : Three Hours

Maximum : 80 Marks

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

1. Translator is a low-level programming language, which is known as _____.
 - (a) Compiler.
 - (b) Assembler.
 - (c) Loader.
 - (d) Linker.
2. _____ links the program with other programs needed for execution.
3. A system program that combines separately compiled modules of a program into a form suitable for execution is _____.
4. In a two-pass assembler, the task of the pass II is to _____.
 - (a) Separate the symbol, mnemonic opcode and operand fields.
 - (b) Build the symbol table.
 - (c) Construct the intermediate code.
 - (d) Synthesize the target program.
5. A macro definition consists of _____.
 - (a) A macro prototype statement.
 - (b) One or more modal statements.
 - (c) Macro pre-processor statements.
 - (d) All of the above.
6. A static binding is a binding performed _____ the execution of a program begins.
 - (a) After.
 - (b) Before.
 - (c) At the same time.
 - (d) None of the above.

Turn over

7. An analysis, which determines the syntactic structure of the source statement is known as _____.
(a) Semantic analysis. (b) Syntax analysis.
(c) Process analysis. (d) Function analysis.
8. The bottom-up parsing method is also called as _____.
(a) Shift reduce parsing. (b) Predictive parsing.
(c) Recursive descent parsing. (d) None of the above.
9. Which of the following class of statement usually produces no executable code when compiled ?
(a) Assignment statement.
(b) Structural statements.
(c) Input and output statements.
(d) Declaration statements.
10. YAAC resolves conflicts by of types :
(a) Reduce - Reduce. (b) Shift - Reduce.
(c) Shift - Shift. (d) Both (a) and (b).

(10 × 1 = 10 marks)

Part B

Answer **all** questions.

Each question carries 3 marks.

11. What are compilers ? Give one example.
12. What are macro processors ?
13. What are dynamic binders ?
14. What is meant by lexical analysis ?
15. What is LEX ?

(5 × 3 = 15 marks)

Part C

Answer any **five** questions.

Each question carries 5 marks.

16. What is system software ? Explain the main goals of system software.
17. Explain the design of a single-pass assembler.
18. Explain the functions of MASM macro processor.
19. Explain about macro definition and macro expansion.
20. What is bootstrap loader ? Explain its requirements.
21. Explain the functions of a loader.

22. Explain the differences between static binding and dynamic binding
23. Write a note on Overlays.

(5 × 5 = 25 marks)

Part D

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

24. Compare a two-pass assembler with a one-pass assembler. How forward references are handled in one pass assemblers ?
25. State and explain the algorithm for one pass macro processor.
26. Explain dynamic linking for loading and calling of a subroutine concept.
27. Explain the different phases of a compiler.
28. Write a note on :
- (i) LEX.
 - (ii) YACC.

(3 × 10 = 30 marks)