

Reg. No. :

VI Semester B.Sc. Degree (CBCSS – Reg./Supple./Improv.) Examination, April 2021 (2014 – 2018 Admissions) CORE COURSE IN COMPUTER SCIENCE 6B13CSC : System Software

Time : 3 Hours

Max. Marks: 40

 $(0.5 \times 8 = 4)$

SECTION - A

1. One word answer :

- a) _____ is a rule of grammar which is also known as rewriting rule.
- b) _____ eliminates the need to memorize numeric operation code.
- c) _____ is a software which bridges a specification or execution gap.
- d) Intermediate code generation phase gets input from _____
- e) _____ is a program that converts assembly language into machine code.
- f) _____ is the semantic gap between two specifications of the same task.
- g) _____ is also known as Parsing.
- h) _____ is the gap between the semantics of programs written in different programming languages.

SECTION - B

Write short notes on **any seven** of the following questions : (7×2=14)

- 2. Define Language Processor.
- 3. What is intermediate code ? Explain its advantages.

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-2-

- 4. What is IC ?
- 5. Define Grammar.
- 6. What is the role of OPTAB in an assembler ?
- 7. Define load and go assembler.
- 8. What is meant by Code Optimization?
- 9. What are live variables ?
- 10. What is dynamic linking?
- 11. Define System Software.
- 12. What is an absolute loader?
- 13. What is a parse tree ?
- 14. What is forward reference?
- 15. How is macro defined ?

SECTION – C

Answer any four of the following questions :

- 16. Compare machine and assembly languages.
- 17. Explain compilation of an expression.
- 18. Differentiate between direct linking and dynamic linking.
- 19. What is meant by ambiguity in grammar specification ?
- 20. Which are the different types of Grammar?
- 21. Which are the different assembly language statements ?
- 22. Explain Scanning and Parsing.
- 23. Which are the basic elements of assembly language programming ?

 $(4 \times 3 = 12)$

-3-

K21U 0098

 $(2 \times 5 = 10)$

SECTION - D

Answer any two of the following questions :

24. What is assembler ? Explain the design specification of an assembler.

25. Explain in detail about loaders and linkers.

26. Define Language Processing and explain Language Processing Activities.

27. What is a Compiler ? Explain in detail about compiler and its phases.

28. Explain Derivation, Reduction and Parse tree in detail with example.

29. Define Language Processing and explain the phases and passes of a Language Processor.