

K-332

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[Roll No.]

BCA-20

**BCA VIth Semester
Examination Dec., 2023**

SYSTEM PROGRAMMING

Time : 2 Hours]

[Max. Marks : 70

*Note :- This paper is of Seventy (70) marks divided into two (02) Sections 'A' and 'B'. Attempt the questions contained in these Sections according to the detailed instructions given there in. **Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.***

Section-A

(Long Answer Type Questions) 2×19=38

*Note :- Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any *two* (02) questions only.*

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(1)

P.T.O.

1. What is Language Processor ? Mention various phases of Language Processor. Explain any one phase in detail.
2. Explain the use of compiler in system programming. Explain all the phases of compiler with suitable example.
3. What do you mean by LALR parsing ? Construct the LALR parsing table for the following grammar :
$$S \rightarrow Aa \mid bac \mid dc \mid bda$$
$$A \rightarrow d$$
4. What are basic elements of assembly language programming ? Explain the three basic facilities of assembly language. Explain one pass assembler.
5. Explain the concept of Relocation and linking with suitable example. What are the different steps that are used to design a Linker ?

Section–B

(Short Answer Type Questions) 4×8=32

Note :- Section ‘B’ contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. What do you mean by ambiguous grammar ? How to remove the ambiguity ? Discuss in detail.

2. Explain about LEX and YACC with suitable example.
3. What is parsing ? Differentiate between top down parsing and bottom up parsing.
4. What is pure and impure interpreter ? Explain design of an editor.
5. Explain left recursion, left factoring and backtracking in top down parsing.
6. Lexical analyzer is called as scanner. Do you agree with this statement? Justify our answer.
7. Discuss in detail the architecture of Intel 8088.
8. What is difference between local and global optimization ?
