

Roll No.

Total No. of Pages : 2

Total No. of Questions : 09

B.Tech. (CSE/IT) (Sem.-4)
SYSTEMS PROGRAMMING
Subject Code : CS-210
Paper ID : [A0462]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

1. Write briefly :

- a) Give the difference between multiprogramming and multiprocessing.
- b) What is the difference between a macro and a subroutine?
- c) Define Grammar of a language. Which grammar is used in parsing?
- d) What is system programming?
- e) How non-relocatable programs are different from relocatable programs?
- f) What is the use of LTORG pseudo-op?
- g) Give the difference between BALR and USING.
- h) What is relocation? Why is it needed?
- i) What is bootstrap loader?
- j) What is the difference between DFA and N DFA?

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SECTION-B

2. What is parsing? Explain the difference between top-down and bottom-up parsing.
3. Write down the general model for the translation process of a C program.
4. Enumerate the data structures used during the first pass of the assembler. Indicate the fields of these data structures and their purpose/usage.
5. Give details about ESD, TXT, RLD and END cards with a suitable example.
6. What are the advantages of Intermediate Representation? What are the various forms of representing intermediate code?

SECTION-C

7. Write short notes on :
 - a. YACC.
 - b. Debuggers.
8. What are the functions of passes used in two-pass assembler? Explain pass-1 algorithm.
9. What are the advantages of code optimization? Explain various optimizing transformations.