

PC-10093/NB

J-3/2111

SYSTEM SOFTWARE-313
(Semester-V)

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt *five* questions in all, selecting *two* questions each from Section-A and B. Section-C is compulsory.

SECTION-A

- I. (a) Differentiate between application software and system software. (8)
(b) What are various types of system software? Discuss in detail. (7)
- II. What are language processing activities? What are various language processors? Discuss in detail. (15)
- III. What features of assembly language required as to build a two pass assembler? Discuss the design of two pass assembler in detail. (15)
- IV. Write short note on the following :
 - (a) Absolute loader. (7.5)
 - (b) Relocatable loader. (7.5)

SECTION-B

- V. Draw a block diagram of a compiler? Explain the Lexical Analysis and syntactic analysis phases of a compiler in detail. (15)
- VI. What do you mean by parsing? What are various types of parsing? Discuss any *one* type of parsing in detail. (15)
- VII. Is code optimization an important phase of compilation? What are different ways of optimizing the code? Explain any two schemes with the help of suitable examples. (15)
- VIII. Elaborate various software tools for program development. (15)

SECTION-C

- IX. (a) Discuss in brief various data transfer instructions used in Assembly language. (3)
- (b) What are the merits and demerits of single pass assembler? (3)
- (c) What is scanning process in compilation? (3)
- (d) What are the uses of intermediate code forms? (3)
- (e) Write short note on user interface. (3)
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