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(2064)

14642

B. Tech 4th Semester Examination

System Software (N.S.)

CS-221

Time : 3 Hours

Max. Marks : 100

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt one question each from Sections A, B, C and D. Section E is compulsory. Write suitable comments wherever necessary. Assume Data wherever necessary.

SECTION - A

1. How would you classify system software? In which categories would you put language processors and operating systems? Why? Would you consider a text editor a system program or an application program? Justify. (20)

OR

2. Explain in detail the machine structure of 360/370 machine. (20)

SECTION - B

3. Explain in detail the design of a two pass assembler. (20)

OR

4. (a) What are the advantages of using a macro? (10)
(b) Explain how duplicate literals are handled by assembler? (10)

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SECTION - C

5. Explain Compile and go loader scheme in detail. (20)

OR

6. What is the difference between static and dynamic linking?
Explain in detail direct linking loader. (20)

SECTION - D

7. Explain why binary search is more efficient than linear search?
Explain with suitable example bucket sort algorithm. (20)

OR

8. What are the different types of text editors? Explain line and stream editor in detail. (20)

SECTION - E

9. Short answer type questions:-

- (i) What do you mean by linking loader?
- (ii) What is meant by program relocation?
- (iii) How the macro is processed using two passes?
- (iv) Distinguish between keyword and positional parameters in macros.
- (v) Differentiate between compiler and interpreter.
- (vi) What is the role of a system administrator.
- (vii) What is the complexity of bucket sort algorithm?
- (viii) What are hardware independent features of system software?
- (ix) What is conditional macro expansion?
- (x) Differentiate between screen and structure editor.

(2×10=20)