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B. Sc. IT (Semester – 3rd)
SYSTEM PROGRAMMING
Subject Code: BITE1312
Paper ID: 130414

Time: 03 Hours **Maximum Marks: 60**

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1. Attempt the following:

a. What are the different categories of compilers?
b. Distinguish between linker and loader.
c. What are the functions of a debugger?
d. Distinguish between system and application software.
e. Distinguish between macro and subroutine.
f. Define dynamic relocation
g. How interrupts are handled?
h. Name the different addressing mode.
i. Define intermediate code generation.
j. What do you mean by a multi window editor?

Section – B **(5 marks each)**

Q2. Define and distinguish between single pass and two pass assemblers.

Q3. Draw a flow chart for design of a single pass Macro processor to handle macro calls within macros.

Q4. What do you mean by layered organization of System Software? Discuss in detail.

Q5. What are the different linking schemes? Explain.

Q6. Define and distinguish between DOS and vi editors.

Section – C **(10 marks each)**

Q7. Draw a block diagram of a compiler? Explain the Lexical Analysis and syntactic analysis phases of a compiler in detail.

Q8. Which features of assembly language do require to build a two pass assembler? Discuss the design of two pass assembler in detail.

Q9. Define debugger. What are the different techniques of debugging? Explain giving examples.