

Bachelor of Science (B.Sc.I.T.) Semester—IV (C.B.S.) Examination

COMPILER CONSTRUCTION

Paper—V

Time : Three Hours]

[Maximum Marks : 50

N.B. :— (1) All questions are compulsory and carry equal marks.

(2) Draw well labelled diagrams wherever necessary.

EITHER

1. (A) What is Translator ? Differentiate between Compiler and Interpreter. 5
- (B) Explain Lexical analysis phase with an example. 5

OR

- (C) Explain the phases of Compiler in brief with suitable diagram. 5
- (D) Explain error handling process in detail. 5

EITHER

2. (A) What do you mean by High Level Language ? Explain characteristics of HLL. 5
- (B) What is Statement ? Describe different types of Statements. 5

OR

- (C) Explain lexical and syntactic structure of language. 5
- (D) Explain Dynamic storage allocation in detail. 5

EITHER

3. (A) Explain simple approach to design of Lexical analyzers. 5
- (B) How does the context free grammar define a Language ? Explain. 5

OR

(C) What is parse tree ? Explain how parse tree can be constructed from given derivation. 5

(D) Consider the grammar :

$S \rightarrow i \text{ CtS}$

$S \rightarrow i \text{ CtSeS}$

$S \rightarrow a$

$S \rightarrow b$

Construct leftmost and rightmost derivation. 5

EITHER

4. (A) Explain Top-down parsing with example. 5

(B) Explain Directed Acyclic Graph representation of Basic Blocks. 5

OR

(C) Explain Symbol table in detail. 5

(D) Explain machine model for code generation. 5

5. (A) Explain loop optimization with an example. 2½

(B) Explain call-by-value method of parameter transmission. 2½

(C) Write a note on Input Buffering. 2½

(D) Write a note on precedence function. 2½