

Roll No. ....

**8701**

Printed Pages : 3.

**BT-7 / M 12**

**COMPILER DESIGN**

**Paper—CSE—401**

Time allowed : 3 hours]

[Maximum marks : 100

**Note:** There are eight questions in all. Two questions will be set from each unit. Students are required to attempt five questions selecting at least one question from each unit.

**Unit-1**

1. What is the overall structure of a compiler ? Explain with the help of a diagram. What are different phases of a compiler ? Discuss each of them. 20
2. Explain the following terms :
  - (a) Assemblers
  - (b) Linkers
  - (c) Loaders
  - (d) Translators
  - (e) L R Parsing tables. 4\*5

**8701** —Q-8—900

[P.T.O.]

**Unit-2**

3. (a) How a symbol table helps in translation of code in the compiler ? What are different components of a symbol table ? 10
- (b) What data structure is used to create the symbol table ? How the contents of symbol table are accessed. 10
4. (a) Discuss various syntax directed translation schemes. 10
- (b) How syntax directed translators are implemented? Explain the process. 10

**Unit-3**

5. (a) Which are the errors detected during Lexical phase of compiler ? How these are figured out ? 10
- (b) Which errors are found in the Syntactic phase ? What are the techniques / methods used to find these errors ? 10



6. Discuss the implementation of a single stack allocation scheme for run time storage. 20

#### Unit-4

7. Code optimization is an important phase of the compiler which is becoming sophisticated with the use of latest algorithms. Discuss various code optimization schemes available in various compilers with the help of examples. 20
8. What you understand by code generation ? How it helps the programmer ? What are the issues in code generation techniques ? Discuss it taking some examples. 20