

Short Answer Questions

- Define Compiler. Write the properties of a compiler.
- Define bootstrapping.
- Define Token and Pattern.
- List out error recovery techniques.
- State left recursive grammar.
- Define syntax directed definition.
- Define cross compiler.
- Identify tokens and lexemes from the following code:

```
void main()  
{  
  int a,b;  
  scanf("%d%d",&a,&b");  
  printf("%d",a+b);  
}
```
- List out types of parsers.
- Define ambiguous grammar with example.
- List out applications of SDT.
- List out data structures used in compiler.

Long answer questions

- Explain the various phases of a compiler in detail. Also Write down the output for the following expression after each phase total = count + rate * 60.
- Write down the steps to compute CLOSURE and GOTO Functions.
- Construct Predictive Parsing Table for the following Grammar

$$E \rightarrow E + T \mid T$$
$$T \rightarrow T * F \mid F$$
$$F \rightarrow (E) \mid id$$

- Explain the differences between L-attribute and S-attribute definitions with example.
- Explain the role of Lexical Analyzer and also list out issues of Lexical Analyzer
- Explain Specification of LEX with example.
- Construct Canonical set of items LR(0) for the following grammar and design DFA for the items.

$$E \rightarrow E + T \mid T$$
$$T \rightarrow T * F \mid F$$
$$F \rightarrow (E) \mid id$$

- Explain role of parser.
- Construct SDD for the given grammar

$$E \rightarrow E + T \mid T$$
$$T \rightarrow T * F \mid F$$
$$F \rightarrow (E) \mid id.$$

- Differentiate S-attributed and L-attributed definitions.
- Describe input buffering and write short notes on sentinels.
- Explain the Role of a Parser and also explain LR(1)parser with example.

