

KATHMANDU UNIVERSITY  
Department of Computer Science and Engineering  
First Internal Assessment  
2022

Level: B.E.  
Year: III  
Time: 1 hrs.

Course: COMP 301  
Semester: I  
F.M.: 20

Answer All Questions:

- ✓ 1. What are the disadvantages of having too many features in a language? What does it mean for a program to be reliable?
2. Define *syntax* and *semantics*. What is the difference between a sentence and a sentential form?

- ✓ 3. Consider the following grammar:

$\langle S \rangle \rightarrow \langle A \rangle a \langle B \rangle b$

$\langle A \rangle \rightarrow \langle A \rangle b \mid b$

$\langle B \rangle \rightarrow a \langle B \rangle \mid a$

Which of the following sentences are in the language generated by this grammar?

- baab
- bbbab
- bbaaaaa
- bbaab

- ✓ 4. What are phrase, simple phrase and handle in a sentential form? Describe the parsing problem for a top-down parser.