Sec-1

(Q2) Define parse tree. Find pase tree the string abbcde considering the production.

$S \rightarrow aAcBe$

$A \rightarrow Ab$

$A \rightarrow b$

$B \rightarrow d$

Is this ambiguous? Justify.

Soln

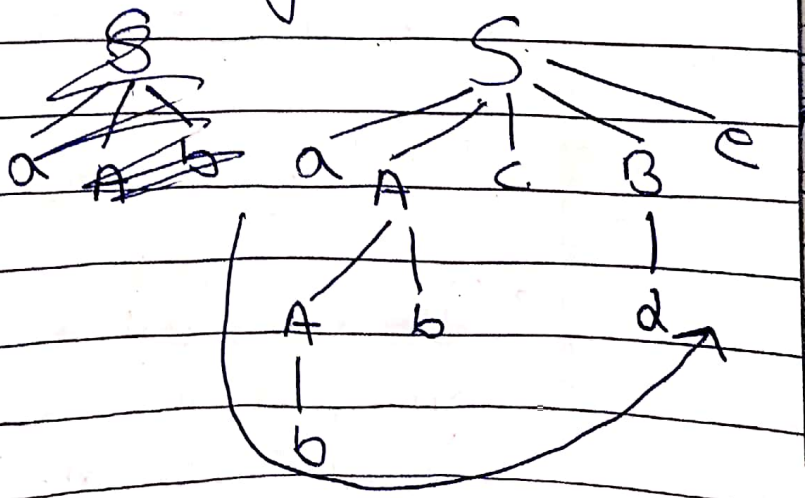
- A parse tree is pictorial representation of derivation, so it is also known as derivation tree.
- Parse tree is the representation of derivation a contex free language (CFL) from a given context free Grammar (CFG).

$S \rightarrow aAcBe$

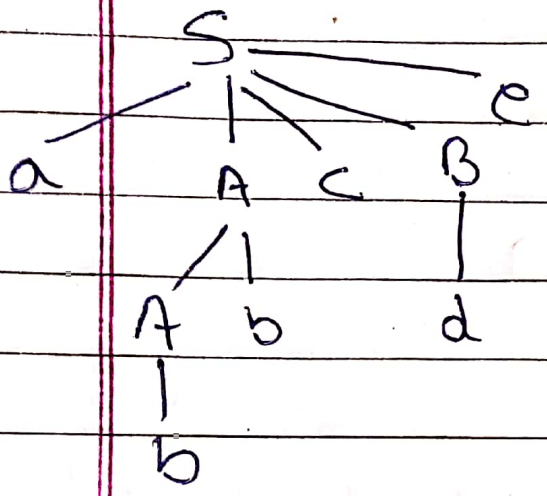
$A \rightarrow Ab/b$

$B \rightarrow d$

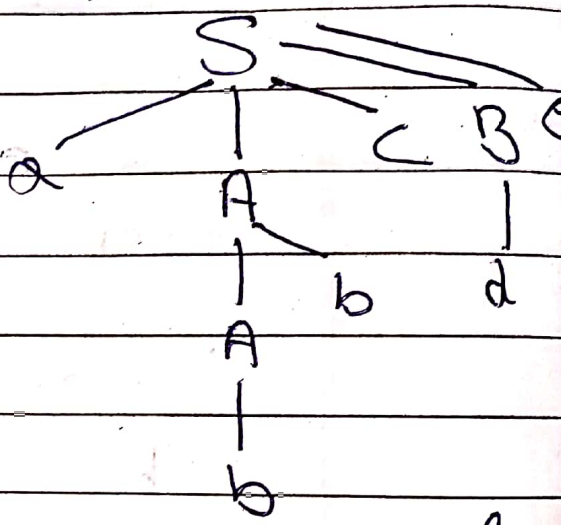
Parse tree for string abbcde is



Left most derivation



Right most derivation



As both the derivation tree are equal.
Hence the given grammar is not ambiguous.