

Date & Time of Examination - 01/12/2021 @ 9:30 AM

Examination Roll No. - 18312911011

Name of Program - B.tech (IT & MI)

Semester / Year - VII Semester / IV year

Unique Paper Code - 911711

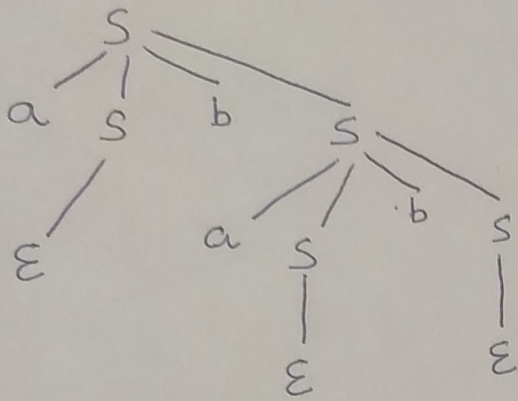
Title of Paper - Computer Language, design
and Engineering

Q.6

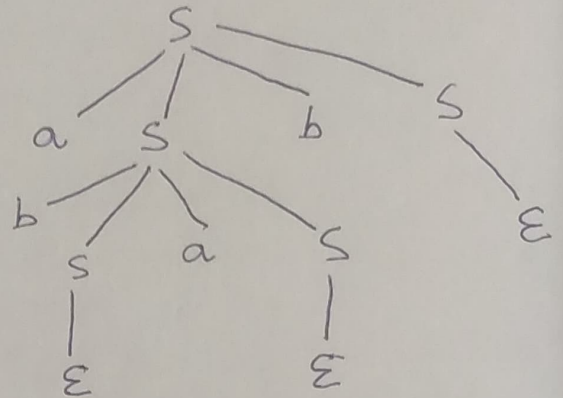
To check whether the grammar is Ambiguous or not :

a) $S \rightarrow aSbS \mid bSaS \mid \epsilon$, input : abab

Parse Tree :



Parse Tree - I

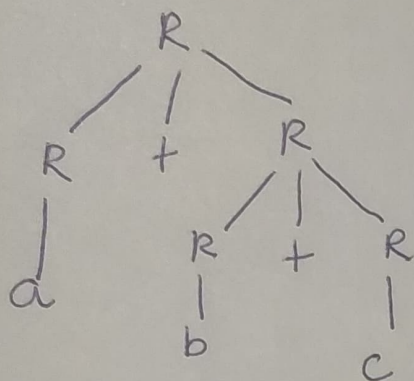


Parse Tree - II

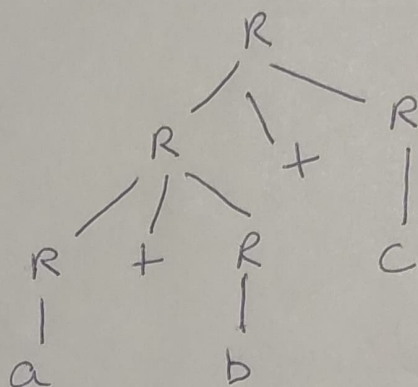
Since two different parse tree exist for the input, therefore the given grammar is ambiguous

b) $R \rightarrow R + R \mid R * R \mid R^* \mid a \mid b \mid c$, Input : $a + b + c$

Parse Tree :



Parse Tree-I



Parse Tree-II

Since two different parse tree exist for input,
therefore the grammar is ambiguous