MCA 5th iSemester Mid Term Examination, 2023

COMPILER DESIGN (PCA05C13)

Time: 1 hours   Full Marks: 20

Group:A

1. Create a DFA that accepts all strings that have even number of letter "a"   (1)
2. Differentiate between compiler and interpreter.   (1)
3. Differentiate between tokens, patterns and lexeme.   (1)
4. Elucidate the significance of DFA and Parse tree in Compiler design?   (1)

Group:B

5. Convert the following regular expression to NFA: abb(a/b)*   (2)
6. Differentiate Top Down parsing and Bottom Up parsing   (2)
7. Define handle pruning by citing examples.   (2)
8. Find the First and Follow of the following grammar:

       $S \rightarrow AaAb | BbBa$

       $A \rightarrow €$ (2)

       $B \rightarrow €$

Group:C

9. Describe the phases of compiler and apply the analysis phases of compiler for the following assignment statement. Position:= initial +rate *60?   (8)