

No Preview
Available

Total No. of Question : [4]

Registration No. :

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Programme Name : Computer Science & Engineering(DS)
Regular T.Y.B.Tech. ESE (A.Y. 2023-24) Sem.V Nov.2023
V SEMESTER (2021 BATCH)
201DSL301-System Programming and Compilers(TH)

Duration : [11:00 AM - 01:00 PM]

Date : 20 Nov, 2023

Day : Monday

Marks : 50

Instructions :

(Q1) All Questions are compulsory [20.0]

(1.1) Explain lexical analysis and syntax analysis phase in compilation process. [6.0]

CO :- 301.1

Blooms Taxonomy :- Understand

(1.2) Explain macro expansion in details. [7.0]

CO :- 301.1

Blooms Taxonomy :- Understand

(1.3) Discuss the various phases of compiler and trace the program segment $c=a+b*4$ for all phases. [7.0]

CO :- 301.2

Blooms Taxonomy :- Understand

(Q2) All Questions are compulsory [10.0]

(2.1) Consider following grammar [5.0]

$S \rightarrow aSbS \mid bSaS \mid \epsilon$

Derive the string abab. Draw corresponding parse tree.

Are these rules ambiguous? Justify.

CO :- 301.2

Blooms Taxonomy :- Understand

(2.2) Construct SLR(1) parsing table for the following grammar [5.0]

$E \rightarrow T + E \mid T$

$T \rightarrow id$

(Q3) All Questions are compulsory [10.0]

(3.1) Define Syntax-directed translation. [5.0]

CO :- 301.4

Blooms Taxonomy :- Understand

(3.2) Define the following [5.0]
i)Annotated parse tree ii)Dependency graph iii)Syntax tree

CO :- 301.4
Blooms Taxonomy :- Understand

OR [3.2 / 3.3]

(3.3) Define an attribute. Give the types of an attribute [5.0]
(Q4) Attempt any two out of three questions [10.0]
(4.1) Explain the peephole optimization in detail. [5.0]

CO :- 301.5
Blooms Taxonomy :- Apply

(4.2) Explain the various issues in the design of code generation [5.0]

CO :- 301.5
Blooms Taxonomy :- Apply

(4.3) Define triples, indirect triples and quadruples. [5.0]

CO :- 301.5
Blooms Taxonomy :- Apply
