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EMAIL: hadirajputofficial@gmail.com
WHATSAPP& CALL: 03087122922

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WARNING: Team HADI is not responsible for any mistake or wrong answer. All students reading and using this document may check and confirm the answers at their own.



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Best of luck!



Question No : 1 of 26

Marks: 1 (Budgeted Time 1 Min)

In compilers, linear analysis is also called _____.

Answer (Please select your correct option)

☐ Lexical analysis

☐ Scanning

☐ Lexical analysis and scanning

☐ None of the given



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Question No : 2 of 26

Marks: 1 (Budgeted Time 1 Min)

Back End of two-pass compiler uses _____ algorithm.

Answer (Please select your correct option)

- ☐ $O(n)$
- ☐ $O(n \log n)$
- ☐ NP Complete
- ☐ None of the Given



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Question No : 3 of 26

Marks: 1 (Budgeted Time 1 Min)

The Back End of a compiler consist of _____

Answer (Please select your correct option)

☐ Instruction selection



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usmanraj20@gmail.com
03228043306

☐ Register allocation

☐ Instruction scheduling

☐ All of the given

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Question No : 4 of 26

Marks: 1 (Budgeted Time 1 Min)

In Back End module of compiler, optimal register allocation uses _____.

Answer (Please select your correct option)

☐ $O(\log n)$

☐ $O(n \log n)$

☐ N P-Complete

☐ None of the given



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Question No : 5 of 26

Marks: 1 (Budgeted Time 1 Min)

A lexeme is a sequence of characters in the source program that is matched by the pattern for a _____.

Answer (Please select your correct option)

- ☐ Linker
- ☐ Token
- ☐ Control flow
- ☐ None of given



Correct Ans
usmanraj2
0322804

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Question No : 6 of 26

Marks: 1 (Budgeted Time 1 Min)

_____ is a regular expression for the set of all strings over the alphabet $\{a\}$ that has an even number of a 's.

Answer (Please select your correct option)

☐ aa^*

☐ $(aa)^*$

☐ aa^*a

☐ $a(aa)^*$



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usmanraj20@gmail.com
03228043306

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Question No : 7 of 26

Marks: 1 (Budgeted Time 1 Min)

What kind of abstract machine can recognize strings in a regular set?

Answer (Please select your correct option)

☐ DFA



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usmanraj20@gmail.com
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☐ NFA

☐ PDA

☐ None of the given

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Question No : 8 of 26

Marks: 1 (Budgeted Time 1 Min)

_____ algorithm is used in DFA minimization.

Answer (Please select your correct option)

- ☐ James's
- ☐ Robert's
- ☐ Hopcroft's
- ☐ None of given



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Question No : 9 of 26

Marks: 1 (Budgeted Time 1 Min)

In DFA minimization, we construct one _____ for each group of states from the initial DFA.

Answer (Please select your correct option)

- ☐ State
- ☐ NFA
- ☐ PDA
- ☐ None of given



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03228043306

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Question No : 10 of 26

Marks: 1 (Budgeted Time 1 Min)

In Flex specification file, different sections are separated by _____ .

Answer (Please select your correct option)

☐ %%



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☐ &&

☐ ##

☐ None of given

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Question No : 11 of 26

Marks: 1 (Budgeted Time 1 Min)

Recursive ____ parsing is done for LL(1) grammar.

Answer (Please select your correct option)

☐ Decent



☐ Ascent

☐ Forward

☐ None of the given

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Question No : 12 of 26

Marks: 1 (Budgeted Time 1 Min)

Parser takes tokens from scanner and tries to generate _____

Answer (Please select your correct option)

- ☐ Binary Search tree
- ☐ Parse tree.
- ☐ Binary Search tree and Parse tree.
- ☐ None of the given



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Question No : 13 of 26

Marks: 1 (Budgeted Time 1 Min)

_____ is an important component of semantic analysis.

Answer (Please select your correct option)

☐ Code checking

☐ type checking.

☐ Flush checking.

☐ None of the given



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Question No : 14 of 26

Marks: 1 (Budgeted Time 1 Min)

In predictive parsing table, the rows represents _____ .

Answer (Please select your correct option)

- ☐ Terminals
- ☐ Both non-terminal and terminals
- ☐ Non-terminals
- ☐ None of the given

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Question No : 15 of 26

Marks: 1 (Budgeted Time 1 Min)

In LL(1) parsing algorithm, ____ contains a sequence of grammar symbols.

Answer (Please select your correct option)

- ☐ Stack
- ☐ Link List
- ☐ Array
- ☐ None of the given.



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Question No : 16 of 26

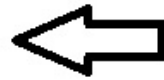
Marks: 1 (Budgeted Time 1 Min)

Consider the grammar

$$A \rightarrow B C D$$
$$B \rightarrow h B \mid \varepsilon$$
$$C \rightarrow C g \mid g \mid C h \mid i$$

Answer (Please select your correct option)

☐ h, g, i



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☐ g

☐ h

☐ None of the given.

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Question No : 17 of 26

Marks: 1 (Budgeted Time 1 Min)

Consider the grammar

$$A \rightarrow B C D$$

$$B \rightarrow h B \mid \varepsilon$$

$$C \rightarrow C g \mid g \mid C h \mid i$$

first of B is

Answer (Please select your correct option)

☐ h, i

☐ h, ε

☐ g

☐ None of the given.



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Question No : 17 of 26

Marks: 1 (Budgeted Time 1 Min)

$A \rightarrow B C D$
 $B \rightarrow h B \mid \varepsilon$
 $C \rightarrow C g \mid g \mid C h \mid i$
 $D \rightarrow A B \mid \varepsilon$

First of B is _____.

Answer (Please select your correct option)

☐ h, i

☐ h, ε

☐ g

☐ None of the given.



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Question No : 18 of 26

Marks: 1 (Budgeted Time 1 Min)

Consider the grammar

$$A \rightarrow B C D$$

$$B \rightarrow h B \mid \varepsilon$$

$$C \rightarrow C g \mid g \mid C h \mid i$$

Answer (Please select your correct option)

☐ h, g

☐ h

☐ h, g, i, ε

☐ None of the given



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Question No : 18 of 26

Marks: 1 (Budgeted Time 1 Min)

$A \rightarrow B C D$
 $B \rightarrow h B \mid \epsilon$
 $C \rightarrow C g \mid g \mid C h \mid i$
 $D \rightarrow A B \mid \epsilon$

First of D is _____.

Answer (Please select your correct option)

- ☐ h, g
- ☐ h
- ☐ h, g, i, ϵ
- ☐ None of the given



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Question No : 19 of 26

Marks: 1 (Budgeted Time 1 Min)

Consider the grammar

$$A \rightarrow B C D$$

$$B \rightarrow h B \mid \varepsilon$$

$$C \rightarrow C g \mid g \mid C h \mid i$$

Answer (Please select your correct option)

☐ h, \$

☐ i

☐ g, \$

☐ None of the given.

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Question No : 19 of 26

Marks: 1 (Budgeted Time 1 Min)

$A \rightarrow B C D$
 $B \rightarrow h B | \epsilon$
 $C \rightarrow C g | g | C h | i$
 $D \rightarrow A B | \epsilon$

Follow of D is ____.

Answer (Please select your correct option)

☐ h, \$

☐ i

☐ g, \$

☐ None of the given.

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Question No : 20 of 26

Marks: 1 (Budgeted Time 1 Min)

_____ parsers never shifts into an error state.

Answer (Please select your correct option)

☐ LS

☐ LT

☐ LR

☐ LP



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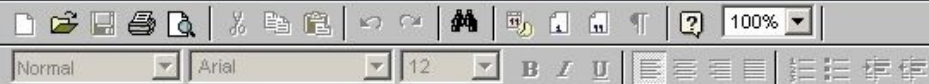
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Question No : 21 of 26

Marks: 2 (Budgeted Time 4 Min)

Write a regular expression for the language of all words that starts and ends with different letters.

Answer ([Please click here to Add Answer](#))



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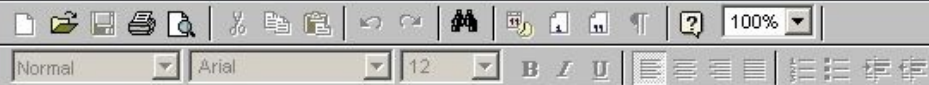
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Question No : 22 of 26

Marks: 2 (Budgeted Time 4 Min)

How linker plays an important role with respect to compiler construction?

Answer ([Please click here to Add Answer](#))



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Question No : 23 of 26

Marks: 3 (Budgeted Time 6 Min)

Can we call shift-reduce parsing as bottom up parsing? Justify your answer with reason.

Answer ([Please click here to Add Answer](#))

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Question No : 24 of 26

Marks: 3 (Budgeted Time 6 Min)

Considering the following grammar, calculate the first set of non-terminals S, A and B.

$S \rightarrow AB$

$A \rightarrow a \mid \epsilon$

$B \rightarrow b \mid \epsilon$

Answer (Please [click here](#) to Add Answer)



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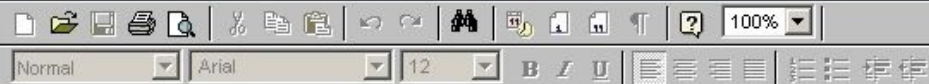
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Question No : 25 of 26

Marks: 5 (Budgeted Time 10 Min)

Suppose that you are going to construct a compiler for a regular language and currently you are constructing a suitable predictive parsing from the grammar. If you have a production rule which is not clear to expand a non-terminal then how will you handle this situation and what will you name this procedure.

Answer (Please [click here](#) to Add Answer)



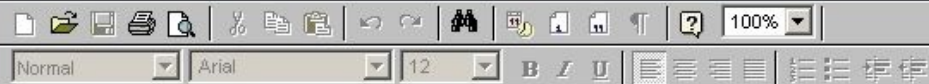
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Considering string "ab", show that the following grammar is ambiguous using parse trees. The ϵ below is epsilon.

$$S \rightarrow A B A B$$
$$A \rightarrow a A \mid \epsilon$$
$$B \rightarrow b B \mid \epsilon$$

Answer (Please [click here](#) to Add Answer)



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