

Sample Question

For the students:- All the Questions are compulsory and carry equal marks .

Q1.	The total number of states and transitions required to form a moore machine that will produce residue mod 3.
Option A:	3 and 6
Option B:	3 and 5
Option C:	2 and 4
Option D:	2 and 5
Q2.	RR* can be expressed in which of the forms:
Option A:	R+
Option B:	RR+
Option C:	U RR
Option D:	R+

Q3.	The output alphabet can be represented as:
Option A:	δ
Option B:	Δ
Option C:	Σ
Option D:	+
Q4.	There are _____ tuples in finite state machine.
Option A:	2
Option B:	3
Option C:	4
Option D:	5
Q5.	Regular expression for all strings starts with ab and ends with bba is.
Option A:	aba*b*bba
Option B:	ab(ab)*bba
Option C:	ab(a+b)*bba
Option D:	ab(a+b)*bba**
Q6.	Given grammar A \rightarrow aA a b. The number of steps required to form string aab:
Option A:	2
Option B:	3
Option C:	4

Option D:	5
Q7.	A CFG is ambiguous if _____
Option A:	It has more than one rightmost or leftmost derivations
Option B:	It has only one leftmost derivations
Option C:	No parse tree can be generated for the CFG
Option D:	When CFG is useless
Q8.	A finite automaton accepts which type of language:
Option A:	Type-0
Option B:	type-1
Option C:	Type 2
Option D:	Type 3
Q9.	In mealy machine, the O/P depends upon?
Option A:	state
Option B:	Previous State
Option C:	State and Input
Option D:	Only Input
Q10.	A push down automaton uses _____ data structure.
Option A:	stack
Option B:	queue
Option C:	list
Option D:	heap

Q11.	Which of the operations are eligible in PDA?
Option A:	Push
Option B:	Delete
Option C:	Insert
Option D:	Pop
Q12.	A push down automata can represented using:
Option A:	Only Transition graph
Option B:	Only Transition table
Option C:	Only ID
Option D:	Transition graph, transition table and ID
Q13.	A push down automata is said to be _____ if it has atmost one transition around all configurations.
Option A:	Finite
Option B:	Non regular
Option C:	Non-deterministic

Option D:	Deterministic
Q14.	CFGs are more powerful than:
Option A:	DFA
Option B:	NDFA
Option C:	Mealy Machine
Option D:	PDA
Q15.	A turing machine operates over:
Option A:	finite memory tape
Option B:	infinite memory tape
Option C:	depends on the algorithm
Option D:	On stack
Q16.	A Language for which accepted by DFA is a_____
Option A:	Regular Language
Option B:	Non-Regular Language
Option C:	May be Regular
Option D:	Conext sensitive
Q17.	Which of the following does the given parse tree correspond to?
	<pre> graph TD P1((P)) --> O1((0)) P1 --> P2((P)) P1 --> O2((0)) P2 --> I1((1)) P2 --> P3((P)) P2 --> I2((1)) P3 --> E((ε)) </pre>
Option A:	P->1100
Option B:	P->0110
Option C:	P->1100ε
Option D:	P->0101
Q18.	Which of the following statement is false?
Option A:	Context free language is the subset of context sensitive language
Option B:	Regular language is the subset of context sensitive language

Option C:	Recursively enumerable language is the super set of regular language
Option D:	Context sensitive language is a subset of context free language
Q19.	Given Grammar: $S \rightarrow A$, $A \rightarrow aA$, $A \rightarrow e$, $B \rightarrow bA$ Which among the following productions are Useless productions? *
Option A:	$S \rightarrow A$
Option B:	$A \rightarrow aA$
Option C:	$A \rightarrow e$
Option D:	$B \rightarrow bA$
Q20.	Push down automata accepts _____ languages. *
Option A:	Type 3
Option B:	Type 2
Option C:	Type 1
Option D:	Type 0
Q21.	Every grammar in Chomsky Normal Form is: *
Option A:	regular
Option B:	context sensitive
Option C:	context free
Option D:	Unrestricted context sensitive
Q22.	The format: $A \rightarrow aB$ refers to which of the following? *
Option A:	Chomsky Normal Form
Option B:	Greibach Normal Form
Option C:	Backus Naur Form
Option D:	parsing
Q23.	Which of the operations are eligible in PDA? *
Option A:	Push
Option B:	Delete
Option C:	Insert
Option D:	Pop
Q24.	NPDA stands for *
Option A:	Non-Deterministic Push Down Automata
Option B:	Null-Push Down Automata
Option C:	Nested Push Down Automata
Option D:	Node Deterministic Push Down Automata

Q25.	A push down automaton employs _____ data structure. *
Option A:	Queue
Option B:	Linked List
Option C:	Hash Table
Option D:	Stack