394 PU M Tech Network and Internet Engineering

112	f 100 PU_2016_394_E technology that creates a dynamic web content for web application is:- Java Script
0	HTML Java Server Pages (JSP) Cascading Style Sheets (CSS)
101	F 100 PU_2016_394_E number of eight-bit strings beginning with either 111 or 101 is 265 32 64 128
140	F 100 PU_2016_394_E sequence followed in designing a DBMS are:- Physical model, conceptual model, logical model Conceptual model, logical model Logical model, physical model Conceptual model, physical model Conceptual model, physical model
100	f 100 PU_2016_394_E ume the statements S1 and S2 given as:
S2	: Given a context free grammar G, there exists an algorithm for determining whether L(G) is infinite : There exists an algorithm to determine whether two context free grammars generate the same guage.
Whi	ich of the following is true? Both S1 and S2 are correct. S1 is correct and S2 is not correct. S1 is not correct and S2 is correct Both S1 and S2 are not correct.
142	f 100 PU_2016_394_E ich one of the following is a distributed file system?

0	Network file system
0	Andrew file system
0	Novel network
0	All the options are correct
145 DN O	of 100 5 PU_2016_394_E S can obtain theof host if its domain name is known and vice versa. Port address Checksum
0	Station address
0	IP address
102	PU_2016_394_E pich normal form is considered adequate for relational database design? BCNF 2 NF 4 NF 3 NF
148 Cor B a	PU_2016_394_E Insider a system having m resources of the same type. These resources are shared by 3processes A and C which have peak demands of 3, 4 and 6 respectively. For what value ofm deadlock will not cur? 7 13 10
	PU_2016_394_Ecommand can be used to modify a column in a table. set create alter update
10	of 100

The practice addition field of	nputer has a 256 KByte, 4-way set associative, write back data cache with block size of 32 Bytes. rocessor sends 32 bit addresses to the cache controller. Each cache tag directory entry contains, in on to address tag, 2 valid bits, 1 modified bit and 1 replacement bit. The number of bits in the tag of an address is:-
0 2	7
O 1	1
O 16	6
0 14	4
The wis:-	100 PU_2016_394_E vorst case running time to search for an element in a balanced binary search tree with n2 ⁿ elements P(log n) P(n) P(n) P(n log n) P(n2 ⁿ)
Webca	100 PU_2016_394_E Pasting is also known as, as it affords an attractive channel through which online leters can deliver their Internet advertising or other information content.
CL	ustomized programming
O vi	iral programming
O pi	ull programming
O pi	ush programming
	U_2016_394_E rocessor 80386/80486 and the Pentium processor usesbits address bus. 4 6
If the conqueue	100 PU_2016_394_E disk head is located initially at 32, find the number of disk moves required with FCFS if the disk es of I/O blocks requests are 98, 37, 14, 124, 65, and 67:-

133 PU_2016_394_E

0	325 310
121	of 100 PU_2016_394_E ich of the following memory allocation scheme suffers from external fragmentation? Swapping Paging Segmentation Pure demand paging
132 A fil add	of 100 PU_2016_394_E le system with 300 GByte disk uses a file descriptor with 8 direct block addresses, 1 indirect block less and 1 doubly indirect block address. The size of each disk block is 128 Bytes and the size of the disk block address is 8 Bytes. The maximum possible file size in this file system is:- 3 KBytes 280 KBytes 35 KBytes dependent on the size of the disk
130 Whi	of 100 PU_2016_394_E ich of the following suffices to convert an arbitrary CFG to an LL(1) grammar? Removing left recursion and factoring the grammar Factoring the grammar alone Removing left recursion alone None of these of 100
	PU 2016 394 F

```
The following program consists of 3 concurrent processes and 3 binary semaphores. The
semaphores are initialized as S0 = 1, S1 = 0, S2 = 0.
```

```
Process P0
                                 while(true){
                                 wait(S0);
                                 print '0';
                                 release(S1);
                                 release(S2);}
                         Process P1
                                 wait(S1);
                                 release(S0);
                         Process P2
                                 wait(S2);
                                release(S0);
         Ilow many times will P0 print '0'?
    Exactly twice
    Exactly thrice
    At least twice
    Exactly once
19 of 100
111 PU_2016_394_E
Find the binary value for Gray Code "110101".
    100110
    100111
    101111
    100101
20 of 100
113 PU_2016_394_E
Which translates the page to java file and compiles it to servlet class file?
0
    JSP Engine
    ASP Engine
    Servlet Engine
    All the Above
21 of 100
```

149 PU_2016_394_E

Pre-emptive scheduling is the strategy of temporarily suspending a running process:-

```
Before the CPU time slice expires
    To avoid collision
    When it requests I/O
    To allow starving processes to run
22 of 100
110 PU_2016_394_E
The average time required to reach a storage location in memory and obtain its contents is called the:-
    seek time
    access time
    turnaround time
    transfer time
23 of 100
114 PU_2016_394_E
The amount of ROM needed to implement a 4 bit multiplier is:-
    64 bits
    128 bits
    1 Kbits
    2 Kbits
24 of 100
124 PU_2016_394_E
Consider the function func shown below:
    intfunc(int num){
    int count = 0;
    while (num){
     count++;
    num>>= 1;
    return (count);}
The value returned by func (435) is _____.
25 of 100
143 PU_2016_394_E
```

14 13 12 16 26 of 100 144 PU_2016_394_E The data on a DVD is held in the form of on the disc. small pits and bumps small bits blocks of bytes small bytes 27 of 100 122 PU_2016_394_E A 16 bit address bus can generate addresses. 32767 32768 25652 65536 28 of 100 146 PU_2016_394_E Which of the following statements is false? An LL(1) parser is a top-down parser An unambiguous grammar has same leftmost and rightmost derivation LALR is more powerful than SLR An ambiguous grammar can never be LR(k) for any k 29 of 100 103 PU_2016_394_E A good database design (i) Caters primarily to current needs (ii) Caters to current and future needs as organizations grow (iii) Has to be modified when hardware is upgraded (iv) Ensures data security	Station A needs to send a message consisting of 9 packets to Station B using a sliding window (window size 3) and go-back-n error control strategy. All packets are ready and immediately available for transmission. If every 5 th packet that A transmits gets lost (but no packets from B ever get lost), then what is the number of packets that A will transmit for sending the message to B?
C 12 C 16 C of 100 C on the disc. C small pits and bumps C small bits C blocks of bytes Small bytes C of 100 C	^C 14
C of 100 144 PU_2016_394_E The data on a DVD is held in the form of on the disc. small pits and bumps small bits blocks of bytes small bytes 27 of 100 122 PU_2016_394_E A 16 bit address bus can generate addresses. 32767 32768 25652 65536 28 of 100 146 PU_2016_394_E Which of the following statements is false? An LL(1) parser is a top-down parser An unambiguous grammar has same leftmost and rightmost derivation LALR is more powerful than SLR An ambiguous grammar can never be LR(k) for any k 29 of 100 103 PU_2016_394_E A good database design (i) Caters primarily to current needs (iii) Caters to current and future needs as organizations grow (iii) Has to be modified when hardware is upgraded	° 13
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144 PU_2016_394_E The data on a DVD is held in the form ofon the disc. Small pits and bumps small bits blocks of bytes small bytes 27 of 100 122 PU_2016_394_E A 16 bit address bus can generate addresses. 32767 32768 25652 65536 28 of 100 146 PU_2016_394_E Which of the following statements is false? An LL(1) parser is a top-down parser An unambiguous grammar has same leftmost and rightmost derivation LALR is more powerful than SLR An ambiguous grammar can never be LR(k) for any k 29 of 100 103 PU_2016_394_E A good database design (i) Caters primarily to current needs (iii) Caters to current and future needs as organizations grow (iii) Has to be modified when hardware is upgraded	° 16
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103 PU_2016_394_E A good database design (i) Caters primarily to current needs (ii) Caters to current and future needs as organizations grow (iii) Has to be modified when hardware is upgraded	An ambiguous grammar can never be LR(k) for any k
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C ii. iv	(ii) Caters to current and future needs as organizations grow (iii) Has to be modified when hardware is upgraded (iv) Ensures data security

0	iii, iv
0	i, ii
\sim	i, ii, iii
	of 100
	PU_2016_394_E ch of the following grammar rules violate the requirements of an operator grammar? P, Q, R are non
term	ninals, and r, s,t are terminals.
	-> QR P->QsR
(iii) I	2 -> £
. ,	P ->QtRr
	(i) only
0	(iii) and (iv) only
	(i) and (iii) only
0	(ii) and (iii) only
169	of 100 PU_2016_394_M bback addressof IPv6 address is equivalent to the IPV4 loopback address 127.0.0.1.
\sim	(::0)
	(1::)
0	(::)
	(::1)
	of 100
	PU_2016_394_M ch of the following is/are the DDL statements?
0	Create
0	Alter
0	Drop
0	All the options are correct
179	of 100 PU_2016_394_M at is the maximum size of data that the application layer can pass on to the TCP layer?
0	Any Size
0	65,535 bytes
0	1526 bytes
0	1500 bytes

166	of 100 5 PU_2016_394_M isting of wire reduces:-
0	a) Interference
0	b) Impulse noise
0	c) Low frequency interference
0	d) Both (a) and (c)
167 The eith	of 100 7 PU_2016_394_M e regular expression to denote a language L which accepts all the strings which begin or end with her 00 or 11 is
0	[(00(0+1)* 11] + [11(0 + 1)* 00]
0	(00+11) (0+1)* (00+11)
0	[(00+11) (0+1)*] + [(0 + 1)* (00+11)]
0	[(00+11) (0+1)+] + [(0 + 1)+(00+11)]
176 In r	of 100 5 PU_2016_394_M round robin CPU scheduling as time quantum is increased the average turnaround time:-
0	Remains constant
0	Increases
0	Decreases
0	Varies Irregularly
178	of 100 3 PU_2016_394_M nich is not the control bus signal?
0	CLEAR
0	RESET
0	WRITE
О	READ
177 At a	of 100 7 PU_2016_394_M a particular time of computation the value of a counting semaphore is 7.Then 20 P operations and 15 V erations were completed on this semaphore. The resulting value of the semaphore is:- 42 12
0	2

° ₇	
39 of 100 165 PU_2016_394_M In algorithm, special messages called probes are circulated along the edge of wait for graph (WFG) to detect a cycle.	or
Edge chasing algorithm	
Global state detection	
Diffusion computation based algorithm	
Path pushing algorithm	
40 of 100 175 PU_2016_394_M	
Given the following expression grammar: E -> E * F F+E F F -> F-F id Which of the following is true?	
- has higher precedence than *	
* has higher precedence than +	
+ has higher precedence than *	
+ and - have same precedence	
41 of 100 199 PU_2016_394_D Consider the tree arcs of a BFS traversal from a source node W in an unweighted,connected, undirect graph. The tree T formed by the tree arcs is a data structure for computing:-	ted
The shortest paths from W to only those nodes that are leaves of T.	
The shortest path from W to every vertex in the graph.	
The shortest path between every pair of vertices.	
The longest path in the graph	
42 of 100 188 PU_2016_394_D A RAM chip has a capacity of 1024 words of 8 bits each (1Kx8) . The number of 2x 4decoders with enable line needed to construct a 16Kx16 RAM from1Kx8 RAM is:- 7 5	
° 6	

0	4
198 Dro	of 100 PU_2016_394_D p Table cannot be used to drop a table referenced by a constraint.
0	Primary Key
0	Foreign Key
0	Local Key
0	Composite Key
196 Whi	of 100 PU_2016_394_D ich of the following SQL command can be used to modify existing data in a database table?
0	CHANGE
0	NEW
0	MODIFY
0	UPDATE
197	PU_2016_394_D database contains transitive dependency, which of the normal form is not satisfied? First and Second Normal Form First Normal form Second normal form Third normal form
185	of 100 PU_2016_394_D the following even parity hamming code, "0101110"
0	Error occurred in position 5
0	Error occurred in position 1
0	Error occurred in position 3
0	No error
186 Wha	of 100 PU_2016_394_D at technology is being referred to as Web 3.0?
0	Semantic Web
0	Social Networking
O	Read Write web

0	Open Source Technology
	of 100 5 PU_2016_394_D
R	ecognize the CFL for the given CFG. S->aB bA, A->a aS bAA, B->b bS aBB
0000	Strings contain odd number of a's and even number of b's. Strings contain even number of a's and even number of b's. Strings contain odd number of a's and odd number of b's. Strings contain equal number of a's and equal number of b's.
189	of 100 PU_2016_394_D ich of the following represents the beginning address of the block that contains 1024 addresses? 123.45.43.128 224.102.20.3 17.17.32.0 205.16.32.192
187	of 100 'PU_2016_394_D s method ensures that each XML element type and attribute name has a unique identity:- Named pipe MPLS Namespace Fully Qualified Domain Name
134	of 100 PU_2016_394_E ich of the following derivation a top-down parser use while parsing an input string? Rightmost derivation Leftmost derivation Leftmost derivation traced out in reverse Rightmost derivation traced out in reverse

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	PU_2016_394_E order is nothing but:-
0	Breadth first search
0	Topological sort
0	Depth first search
0	Linear order
104 Wh	of 100 PU_2016_394_E ich of the following algorithms bring elements to sorted order by moving one element to their correct ition in every iteration, while still the other elements are in unsorted order?
ii. S iii. C iv.M	ubble sort selection Sort Quick Sort Merge Sort
0	i, iii and v
0	ii, iii and iv
	i, ii and iii
0	i, iii and iv
131	of 100 PU_2016_394_E Error Handling routine of a compiler can check:-
0	Only logical errors
0	Neither logical nor syntax errors
0	Only syntax errors
0	Both logical and syntax errors
149 Rel	of 100 PU_2016_394_E ational Algebra does not have:-
0	Selection operator.
0	Aggregation operators.
0	Division operator
0	Projection operator.
147	of 100 'PU_2016_394_E erential integrity is directly related to:-
0	Primary key
0	Relation key

0	Candidate key
0	Foreign key
145 A re	of 100 PU_2016_394_E Plation is in this form if it is in BCNF and has no multivalued dependencies:
0	second normal form.
0	fourth normal form.
0	third normal form.
0	domain/key normal form.
103 Whi	PU_2016_394_E ch of the following sorting algorithms does not have a sorted sub list since the first iteration of the brithm?
0 0	Selection sort
	Insertion sort
0	Merge sort
0	Quick sort
141	of 100 PU_2016_394_E en the following statements:
141 Give S1 : S2: gran	PU_2016_394_E
141 Give S1 : S2: gran	PU_2016_394_E en the following statements: SLR uses FOLLOW information to guide reductions., LR grammar is a larger subclass of context free grammar as compared to that SLR and LALR mmars.
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141 Give S1: S2: grar Whi	PU_2016_394_E en the following statements: SLR uses FOLLOW information to guide reductions., LR grammar is a larger subclass of context free grammar as compared to that SLR and LALR mmars. ch of the following is true? S1 is not correct and S is not correct.
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140 PU_2016_394_E In compiler the storage manager performs the:-			
(i) Allocation/deallocation of storage to programs (ii) Protection of storage area allocated to a program from illegal access by other programs in the system (iii) The status of each program:-			
(i) and (iii) only			
(i),(ii) and (iii)			
(ii) and (iii) only			
(i) and (ii) only			
62 of 100 121 PU_2016_394_E Which of the following statement is True with respect to linked lists:-			
Pointer overhead			
Insertion and deletion inefficient			
Static memory allocation			
Wastage of storage space			
63 of 100 122 PU_2016_394_E In an AVL tree, at what condition the balancing is to be done? If the 'pivotal value' (or the 'Height factor') is:-			
Less than 1 and greater than -1			
Equal to 1			
greater than 1 or less than -1.			
equal to zero			
64 of 100			

109 PU_2016_394_E

```
SelectionSort(a, n)
for i := 1 to n do
        j:=i;
        for k:=i+1 to n do
                if (a[k] < a[j]) then j:=k;
                t:=a[i]; a[i] := a[j]; a[j] := t;
 In the above snippet, if the input given is in unsorted order, then the complexity would be
    \Theta(n^2)
    O(n^2)
    \delta(n^2)
65 of 100
106 PU_2016_394_E
 Add (a, b, c, m, n)
 {for i := 1 to m do
    for j:= 1 to n do
      c[i,j] := a[i,j] + b[i,j]
 In the above snippet, the number of times the 'i' loop executes is ______.
    m+1
    m-1
    mn
66 of 100
108 PU_2016_394_E
```

```
SelectionSort(a, n)
 for i = 1 to n do
         j:=i:
         for k:=i+1 to n do
                if (a[k] \le a[j]) then j:=k;
                t:=a[i]; a[i] := a[j]; a[j] := t;
 In the above snippet, if the input given is already in sorted order, then the complexity could
 be expressed as
    O(n^2)
    \Omega(n^2)
    \Theta(n^2)
67 of 100
146 PU_2016_394_E
E-R modeling technique is:-
    Right-left approach
    Top-down method
    Bottom-up method
    Tree structure
68 of 100
144 PU_2016_394_E
In a grammar, a non-terminal A is Null if and only if the FIRST(A):-
    Does not contain ε
    Does not contain A
    Contains A
    Contains ε
69 of 100
132 PU 2016 394 E
Which of the following is machine independent phase of a compiler?
0
    Syntax analysis
    Lexical analysis
    Intermediate code generation
```

0	All the options			
120 Ide	of 100 DPU_2016_394_E ntify the data structure which allows deletions at both ends of the list but insertion at only one end:-			
0	Priority queues			
0	Input-restricted deque			
0	Output-restricted deque			
0	Deques			
71 of 100 148 PU_2016_394_E What is a disjoint less constraint?				
0	The database must contain an unmatched foreign key value.			
0	An entity can be joined with another entity in the same level entity set			
0	The same entity may belong to more than one level.			
0	It requires that an entity belongs to no more than one level entity set.			
123	of 100 B PU_2016_394_E at is the bucket size, when the overlapping and collision occur at same time?			
0	one			
0	three			
0	cannot be defined			
0	two			
133	of 100 B PU_2016_394_E interpreter is:-			
0	A program that automates the translation of assembly language into machine language			
0	Is a program that appears to execute a source program as if it were machine language			
0	A program that accepts a program written in high level language and produces an object program			
0	A program that places programs into memory an prepares them for execution			
101 Val	of 100 PU_2016_394_E idation of an algorithm intends to show that			
0	the algorithm works correctly irrespective of any input given			
0	the algorithm works correctly for only legal inputs			
0	the algorithm works correctly for all types of inputs			

```
the algorithm works correctly
75 of 100
102 PU 2016 394 E
Which of the following is a mismatch pair?
i. Program Validation - Debugging
ii. Performance Measurement - Profiling
iii. Program Proving - Program Verification
iv. Algorithm - Pseudocode
    i only
    i & iv
    i & ii
    i & iii
76 of 100
142 PU_2016_394_E
When compared to a compiler, Interpreter is preferred because:-
    a) Interpreter takes less time to execute
    b) Interpreter is much helpful in the early stage of program development
    c) Debugging is faster and easier in Interpreter
    d) Both options b and c
77 of 100
100 PU_2016_394_E
Which of the following algorithms need not fulfill the effectiveness property of an algorithm?
    Approximation Algorithms because they find only approximate solutions
    Heuristic Algorithms because they find the solution based on best estimates
    Randomized Algorithms because they find only random solutions
    All algorithms must be effective
78 of 100
105 PU_2016_394 E
Add (a, b, c, m, n)
 \{fori := 0 \text{ to m-1 do }\}
    for j := 0 to n-1 do
      c[i,j] := a[i,j] + b[i,j]
In the above snippet, the number of times the 'j' loop executes is
    (m-1)(n-1)
    mn
```

```
n-1
    (m-1)n
79 of 100
107 PU_2016_394_E
Add (a, b, c, m, n)
 {for i := 0 to 5 do
   for j:= 0 to 4 do
     c[i,j] := a[i,j] + b[i,j]
In the above snippet, the sum of the number of times every step executes is
    45
80 of 100
130 PU_2016_394_E
The identification of common sub-expression and replacement of run-time computations by compile-time
computations is:-
0
    Data flow analysis
    Loop optimization
    Local optimization
    Constant folding
81 of 100
251 PU_2016_394_M
Which of the following is false with multilevel index?
    Requires less storage compared to a single large index
    Requires less number of I/O operation compared to binary search
    Requires fewer I/O operations
    Requires more number of I/O operation compared to binary search
82 of 100
250 PU_2016_394_M
In a microprocessor, each machine cycles have _____.
    3 to 8 T-states
    3 to 6 T-states
    3 to 10 T-states
```

3 to 4 T-states			
83 of 100 231 PU_2016_394_M The in-order and post-order traversal of a binary tree are DBEAFC and DEBFCA respectively. What will be the total number of nodes in the left sub-tree of the given tree? 1 5 4 3			
84 of 100 253 PU_2016_394_M What is a disjoint less constraint?			
The same entity may belong to more than one level.			
It requires that an entity belongs to no more than one level entity set.			
The database must contain an unmatched foreign key value.			
An entity can be joined with another entity in the same level entity set.			
85 of 100 233 PU_2016_394_M			
If we are sorting an array of eight integers using quick sort and we have just finished the first partitioning with the array looking like this 2 5 1 7 9 12 11 10,			
Which of the following statement is correct ?			
The pivot could be 7 but not 9			
The pivot is neither 7 nor 9			
The pivot is not 7 but could be 9			
The pivot could be either 7 or 9			
86 of 100 232 PU_2016_394_M In a circularly linked list organization, insertion of a record involves the modification of:-			
1 pointer			
3 pointers			
2 pointers			
No pointer			
87 of 100 254 PU_2016_394_M			

Bloc	Block-interleaved distributed parity is RAID level:-			
0	5			
\circ	4.			
\circ	2.			
0	3			
252 In a be re	PU_2016_394_M 16-bit microprocessor, words are stored in two consecutive memory locations. The entire word can ead in one operation provided the first Word is odd Memory address is even			
	Memory address is odd			
0	Word is even			
255 Iden	89 of 100 255 PU_2016_394_M Identify the odd item:-			
0	date			
0	Is			
0	cls			
0	chmod			
90 of 100 234 PU_2016_394_M Which of the following is the most general phase structured grammar?				
0	Left linear grammar			
0	Context sensitive grammar			
0	Right linear grammar			
0	Context free grammar			
268	of 100 PU_2016_394_D at is the output when the following Python code is executed?			
	3 4			
	syntax error			

0	5
269 Mer	of 100 PU_2016_394_D onymy relation means:-
0	B has A as a part of itself
0	A is a kind of B
0	A is superordinate of B
0	A is part of B
260	of 100 PU_2016_394_D tify the odd item:-
0	Iris Pattern
0	Fingerprints
0	Lister
0	Password
263	PU_2016_394_D ch is true about the name and text property of a control in VB? They are the same when the control is first created. They are never the same unless the programmer makes it that way The text property changes to match any changes in the name property. The name property changes to match any changes in the text property.
265	of 100 PU_2016_394_D ose the correct statements about enum used in C#.NET:-
0	An enum variable can be defined inside a class or a namespace
0	An enum variable cannot have a private access modifier
0	An enum variable cannot have a public access modifier
0	An enum variable cannot have a protected access modifier
262	PU_2016_394_D ting operator introduced in PHP 6 is:- (int64)
0	(object)
0	(real) or (double) or (float)

0	(array)
267	of 100 PU_2016_394_D at will be displayed by the following Python code?
list2 list1	= [1,3] P= list1 [0] = 4 t(list2) [1,3] [4,3] [1,4]
261	PU_2016_394_D Linux command for system consistency check and repair is:- check ftp fsck grep
264	of 100 PU_2016_394_D repe of class which does not have its own objects but acts as a base class for its subclass is known as? Abstract class Sealed class Static class Derived class
266	PU_2016_394_D ntify the variable scope that is not supported by PHP:- Hidden variables Function parameters Local variables Global variables