PU M Tech Network and Internet Engineering

185 PU_2015_394
In Linux, _____ command would display all lines in a file that starts with a particular string.

◯ look

◯ view

◯ list

◯ show

140 PU_2015_394
If the instruction contains operation code and address of the operand, the instruction is said to be in the:-

◯ Indexed mode

◯ Direct addressing mode

◯ Immediate addressing mode

◯ Memory addressing

105 PU_2015_394
StarBand provides:-

◯ FTTH internet access

◯ Telephone access

◯ Satellite access

◯ Cable access

218 PU_2015_394
Recursive descent parsing is an example of:-

◯ Bottom up parsing

◯ Predictive parsing

◯ Operator precedence parsing

◯ Top down parsing

200 PU_2015_394
Massively parallel machine is:-

◯ Describes the structure of the contents of a database

◯ A computer where each processor has its own operating system, its own memory and its own hard disk

◯ A programming language based on logic

A computer with several processors

215 PU_2015_394
The graph showing interdependencies of the attributes of different nodes in parse tree is:-

Data Flow diagram

Flow graph

Dependency graph

Dependency Directed graph

195 PU_2015_394
Which is not true?

The intersection of two context-free languages is context-free

The reverse of a context-free language is context-free, but the complement need not be

The union and concatenation of two context-free languages is context-free

Every regular language is context-free because it can be described by a regular grammar

189 PU_2015_394
Robot machine might have cameras and infrared range finders for _____ and various motors of
_____.

Actuators ; Sensors

Sensors ; Agents

Agents ; Actuators

Sensors ; Actuators

157 PU_2015_394
The method of assigning a part of the main-memory address space to I/O ports is called:-

Memory-mapped I/O

I/O mapped I/O

I/O Mapping

Peripheral I/O

217 PU_2015_394
Graph showing basic blocks and their successor relationship is called:-

Control graph

Flow graph

○ Direct acyclic graph

○ Dependency graph

176 PU_2015_394
_____ is required to build native code applications in Android environment.

○ CLR

○ ARR

○ NDK

○ APK

187 PU_2015_394
OpenCV is a:-

○ Computer Vision Library

○ Composite media Library

○ Computer Video Library

○ Complex Vision Library

106 PU_2015_394
What is FRAD in frame relay network?

○ FRAD is used for error detection

○ FRAD is used for error correction

○ FRAD assembles and disassembles the frames coming from other protocols

○ FRAD is used for modulation and demodulation

214 PU_2015_394
If two finite state machines M1 and M2 are isomorphic then:-

○ They cannot be transformed to each other

○ By relabeling edges M1 can be transformed to M2

○ By relabeling states M1 can be transformed to M2

○ By relabeling both edges and states M1 can be transformed to M2

204 PU_2015_394
Which is not Familiar Connectives in First Order Logic?

○ If

○ Or

C And

C Not

199 PU_2015_394
Evolutionary computation is:-

C Combining different types of method or information

C Used to solve complex evolving problems

C Decision support systems that contain an information base filled with the knowledge of an expert formulated in terms of if-then rules

C Approach to the design of learning algorithms that is structured along the lines of the theory of evolution

178 PU_2015_394
The recently released development environment for Android App development is called:-

C Android Backer

C Android Studio

C Android Builder

C Android Pad

211 PU_2015_394
What is used for tracking uncertain events?

C Sensors

C Tracker

C Actuators

C Filtering algorithm

202 PU_2015_394
What does the bayesian network provide?

C Complete description of the problem

C Partial description of the domain

C A network with probabilistic values

C Complete description of the domain

212 PU_2015_394
Peephole optimization is a technique for:-

C It does not generate code

○ Locally improving the target code

○ Restricted improvement of code

○ Generate ready to execute code

196 PU_2015_394
Inductive learning involves finding a:-

○ Regular Hypothesis

○ Inconsistent Hypothesis

○ Irregular Hypothesis

○ Consistent Hypothesis

156 PU_2015_394
When a free block (k bytes) is allocated to make room for the new incoming process (p bytes) and (where k > p), the block is split into used area and unused area (k - p) is called:-

○ Compaction

○ Internal fragmentation

○ Swapping

○ External fragmentation

209 PU_2015_394
Which is used to compute the truth of any sentence?

○ Predicate logic

○ First-order logic

○ Semantics of propositional logic

○ Alpha-beta pruning

194 PU_2015_394
In an Unsupervised learning:-

○ Neither inputs nor outputs are given

○ Specific output values are given

○ Specific output values are not given

○ No specific inputs are given

201 PU_2015_394
Which is not a desirable property of a logical rule-based system?

○ Attachment

○ Truth-Functionality

○ Locality

○ Detachment

184 PU_2015_394
With respect to networks, ARP stands for:-

○ Advanced Rapid Protocol

○ Address Resolution Protocol

○ Address Reservation Protocol

○ Advanced Resource Protocol

163 PU_2015_394
Which of the following is a recently exposed vulnerability?

○ ViNets

○ Tracknet

○ Heartbleed

○ Heartbeat

103 PU_2015_394
For connecting modem, a computer must be equipped with a port that conforms to the RS-232 standard of the Electronic Industries Association of America. What do the letters 'RS' stand for?

○ Recognised Standard

○ Random Sequence

○ Registered Source

○ Recommended Standard

183 PU_2015_394
_____ provides secure tunneling capabilities.

○ OpenVSH

○ OpenESH

○ OpenRSH

○ OpenSSH

192 PU_2015_394

Which is not a property of representation of knowledge?

Inferential Efficiency

Representational Adequacy

Representational Verification

Inferential Adequacy

198 PU_2015_394
Third component of a planning system is to:-

Detect when a solution has been found

Detect when solution will be found

Detect whether multiple solutions exist

Detect whether solution exists or not

207 PU_2015_394
What was originally called the "imitation game" by its creator?

The Logic Theorist

The Turing Test

Cybernetics

Lisp

188 PU_2015_394
The original LISP machines produced by both LMI and Symbolics were based on research performed at:-

RAMD

Stanford University

CMU

MIT

210 PU_2015_394
An auto-associative network is:-

A neural network that contains no loops

A neural network that has only one loop

A single layer feed-forward neural network with pre-processing

A neural network that contains feedback

186 PU_2015_394

Which of the following is not free and open source license?

- ☐ MIT
- ☐ Windows
- ☐ Apache
- ☐ Creative Commons

197 PU_2015_394
What is Transposition rule?

- ☐ From P → Q, infer ~Q → ~P
- ☐ From P → Q, infer Q → ~P
- ☐ From P → Q, infer ~Q → P
- ☐ From P → Q, infer Q → P

219 PU_2015_394
In operator precedence parsing, precedence relations are defined:-

- ☐ Only for certain pairs of terminals
- ☐ Only for certain pairs of non-terminals
- ☐ For all pairs of non-terminals and terminals
- ☐ To delimit the handler

141 PU_2015_394
The CMP instruction is used to perform:-

- ☐ Two's complement operation
- ☐ One's complement operation
- ☐ Compare Operation
- ☐ Complement Operation

113 PU_2015_394
Which of the following is not a form of DoS attack?

- ☐ Vulnerability attack
- ☐ Connection flooding
- ☐ Bandwidth flooding
- ☐ Man in the middle attack

173 PU_2015_394

Zotero is a:-

○ Browser

○ Reference Manager

○ Protocol

○ Firewall

179 PU_2015_394
Which of the following is associated with Big Data?

○ Hadoop

○ Big L

○ Chrome

○ Data centre

190 PU_2015_394
_____ is an environment in which the search takes place.

○ Problem instance

○ Problem space

○ Problem place

○ Data space

206 PU_2015_394
How many possible sources of complexity are there in forward chaining?

○ 1

○ 4

○ 3

○ 2

155 PU_2015_394
The dynamic RAM is constructed with the help of:-

○ Memory cells

○ Semiconductor memory

○ Flip flops

○ Capacitors

181 PU_2015_394

_____ is a major problem of using Pointers.

C Virtuality

C Speed

C Dangling Pointers

C Storage

180 PU_2015_394
Which of the following is not related to programming?

C C+

C VB

C QT

C C#

169 PU_2015_394
JSON stands for:-

C JavaScript Object Notation

C JavaScript Ontology Notation

C JavaScript Object Naming

C JavaScript Original Notation

139 PU_2015_394
A program that interprets the input from a keyboard and converts input into its binary equivalent is called:-

C Binary Converter

C Linker

C Monitor Program

C Loader

104 PU_2015_394
What is the port number for POP3?

C 110

C 90

C 10

C 100

142 PU_2015_394

The operation that performs subtraction operation without using subtraction operation is called:-

 Two's complement operation

 Subtraction operation

 Twos' complement addition

 One's complement operation

191 PU_2015_394
_____ are rules of thumb that may solve a given problem, but do not guarantee a solution.

 Weak methods

 Strong methods

 Probabilistic

 Heuristic

213 PU_2015_394
Consider the grammar:

S → ABSC/Abc
BA → AB
Bb → bb
Ab → ab
Aa → aa

Which of the following sentences can be generated by this grammar?

 abcc

 aabc

 abc

 aab

208 PU_2015_394
What is the advantage of totally ordered plan in constructing the plan?

 Flexibility

 Availability

 Easy to use

 Reliability

203 PU_2015_394
Which of the following "laws" Azimov's first and most important law of robotics?

 robots should be used to eliminate jobs of human workers

Robots must never take actions harmful to humans

Robot actions must never result in damage to the robot

Robots must make business a greater profit

182 PU_2015_394
Which of the following is a Vulnerability scanning tool?

Vulscan

VScanner

VulNET

OpenVAS

205 PU_2015_394
Which is more suitable normal form to be used with definite clause?

Generalized modus ponens

Positive literal

Negative literal

Neutral literal

216 PU_2015_394
Which of the following is not an intermediate code form?

Postfix notation

Quadruples

Syntax trees

Three address codes

177 PU_2015_394
Which of the following is a popular choice for data storage in Android application development?

Sqlite

ASQL

PSQL

SQL+

175 PU_2015_394
The accessibility guidelines for rich internet applications is called as:-

ARIA

RIA 2.0

RIA+

RIAS

193 PU_2015_394
Machine learning is:-

The selective acquisition of knowledge through the use of computer programs

The selective acquisition of knowledge through the use of manual programs

The autonomous acquisition of knowledge through the use of manual programs

The autonomous acquisition of knowledge through the use of computer programs

242 PU_2015_394
_____ selects from jobs in memory those jobs that are ready to execute and allocates the CPU to them.

Short-term (CPU scheduler)

Medium-term scheduler

Long-term (Job scheduler)

Long-term (CPU scheduler)

254 PU_2015_394
Which of the following operator takes only integer operands?

+

%

*

-

248 PU_2015_394
Consider a paging system with the page table stored in memory. If a memory reference takes 200 nanoseconds, how long does a paged memory reference take?

400 nanoseconds

100 nanoseconds

200 nanoseconds

300 nanoseconds

225 PU_2015_394
A grammar where all the productions are in the form A → BC or A → a is said to be in:-

○ Chomsky Normal Form

○ Boyce Codd Normal Form

○ Well Formed

○ Greibach Normal Form

255 PU_2015_394
Who invented the C Language?

○ James Gosling

○ Bjarne Stroustrup's

○ Dennis Ritche

○ Tim Berners-Lee

250 PU_2015_394
What does Belady's Anomaly related to?

○ Memory Management Algorithm

○ Disk Scheduling Algorithm

○ Page Replacement Algorithm

○ Deadlock Prevention Algorithm

249 PU_2015_394
Consider a paging system with the page table stored in memory. If we add associative registers, and 75 percent of all page-table references are found in the associative registers, what is the effective memory reference time? (Assume that finding a page-table entry in the associative registers takes zero time, if the entry is there.)

○ Effective access time = 350 nanoseconds

○ Effective access time = 250 nanoseconds

○ Effective access time = 750 nanoseconds

○ Effective access time = 300 nanoseconds

251 PU_2015_394
What is dispatch latency?

○ The time taken to seek a file in disk

○ The whole time taken by all processors

○ The time taken by the dispatcher to stop one process and start another

○ The time taken by the processor to write a file into disk

238 PU_2015_394

_____ is a much more effective way of overlapping I/O and CPU operations.

○ Schedulers

○ Spooling

○ Buffering

○ Perfecting

235 PU_2015_394

Match the following:- (Codes)

1	Chomsky Normal form	i	$S \rightarrow bSS/aS/c$
2	Greibach Normal form	ii	$S \rightarrow aSb/ab$
3	S Grammar	iii	$S \rightarrow AS/a$ $A \rightarrow SA/b$
4	LL(1) Grammar	iv	$S \rightarrow aBB/aB/a$ $B \rightarrow b$

○ 1 - iii; 2 - iv; 3 - i; 4 - ii

○ 1 - iii; 2 - iv; 3 - ii; 4 - i

○ 1 - iii; 2 - i; 3 - ii; 4 - iv

○ 1 - iv; 2 - iii; 3 - i; 4 - ii

237 PU_2015_394

_____ System uses CPU scheduling and multiprogramming to provide economical interactive use of a system.

○ Real time

○ Interactive

○ Batch

○ Time sharing

252 PU_2015_394

What are two types of Semaphores?

○ Counting semaphore and Binary semaphore

○ Analog semaphore and Digital semaphore

○ Critical semaphore and System semaphore

○ Digital semaphore and Binary semaphore

234 PU_2015_394
Consider the following statements:

1. Recursive languages are closed under complementation
2. Recursively enumerable languages are closed under union
3. Recursively enumerable languages are closed under complementation

Which of the above statements are true?

○ 1 and 2

○ 1 only

○ 2 and 3

○ 1 and 2 and 3

243 PU_2015_394
CPU scheduling algorithm determines an order for the execution of its scheduled processes.
Given n processes to be scheduled on one processor, how many possible different Schedules are there?
Give a formula in terms of n.

○ $n/2$

○ $n!$ (n factorial = $n \_ n$- 1 $\_ n$ - 2 $\_ \ldots \_ 2 \_ 1$)

○ $\log n$

○ $n+1$

233 PU_2015_394
Which of the following is not a part of LL(1) parsing?

○ Pointers

○ Queue

○ Input buffer

○ Stack

259 PU_2015_394
Choose the correct statement.

○ Non zero value represents a false condition

○ 1 represents a false condition

○ Anything that is not 1, represents a false condition

○ 0 represents a false condition

224 PU_2015_394
Given the grammar:

S → aSa, S → bSb, S → b, S → a. S → ε

Which of the following strings is NOT a valid sentence of the grammar?

☐ baabaab

☐ abbbbbbbbbbbba

☐ abbaabb

☐ babababab

220 PU_2015_394
LR(k) grammar:-

☐ Can only examine a maximum of k input symbols

☐ Covers the LL(k) class

☐ Defines handles of length k input symbols

☐ Can be used to identify the production associated with a handle

256 PU_2015_394
How many tokens are in the:

if (age==2)

☐ 4

☐ 7

☐ 6

☐ 5

253 PU_2015_394
Which of the following file format supports in windows 7?

☐ EXT

☐ WFS

☐ NTFS

☐ BSD

275 PU_2015_394
Which of the following statements are TRUE?

1. The problem of determining whether there exists a cycle in an undirected graph is in P.

2. The problem of determining whether there exists a cycle in an undirected graph is NP.
3. If a problem A is NP complete, there exists a non-deterministic time algorithm to solve A.

○ 1 and 3 only

○ 1, 2 and 3

○ 2 and 3 only

○ 1 and 2 only

284 PU_2015_394
While inserting the elements 71, 65, 84, 69, 83 in an empty binary search tree(BST) in the sequence shown, the element in the lowest level is:-

○ 69

○ 83

○ 65

○ 67

286 PU_2015_394
A problem L is NP-complete if L is NP-hard and:-

○ L ε NP

○ L α NP

○ L ≈ NP

○ L = NP

285 PU_2015_394
Consider the following array of elements.

(89, 19, 50, 17, 12, 15, 2, 5, 7, 11, 6, 9, 100)

The minimum number of interchanges needed to convert it into a max-heap is:-

○ 5

○ 2

○ 3

○ 4

261 PU_2015_394
A function contained within the class is called:-

○ Friend

○ Generic

○ Virtual

○ Inline

260 PU_2015_394
Classes are useful because they:-

○ Permit data to be hidden from other classes

○ Can closely model objects in the real world

○ Bring together all aspects of an entity in one place

○ Are removed from memory when not in use

296 PU_2015_394
If A, B and C are the attributes of a relation schema R, which one of the following is the transitive functional dependency?

○ A determines B, B determines C and A determines C

○ A determines B and C determines A

○ A determines C and C determines B

○ A determines B and B determines A

287 PU_2015_394
What would be the cost value for any answering node of a sub tree with root 'r' using branch-bound algorithm?

○ Average

○ Optimal

○ Minimum

○ Maximum

274 PU_2015_394
Consider list recursive algorithms and list recurrence relations as shown below. Each recurrence relation corresponds to exactly one algorithm and is used to derive the time complexity of the algorithm.

Recursive Algorithm	Recurrence Relation
P. Binary Search	1. $T(n) = T(n-k) + T(k) + cn$
Q. Merge Sort	2. $T(n) = 2T(n-1) + 1$
R. Quick Sort	3. $T(n) = 2T(n/2) + cn$
S. Tower of Hanoi	4. $T(n) = T(n/2) + 1$

Which of the following is correct match between the algorithms and their recurrence relations?

○ P - 4, Q - 2, R - 1, S - 3

○ P - 3, Q - 2, R - 4, S - 1

○ P - 4, Q - 3, R - 1, S - 2

○ P - 2, Q - 3, R - 4, S - 1

278 PU_2015_394
If f(n) = n!, g(n) = 2 n h(n) = n (log 2 n), which of the following is true?

○ f(n) = O(g(n)) , g(n) = O(h(n))

○ g(n) = O(f(n)), h(n) = O(f(n))

○ h(n) = O(f(n), g(n) = Ω(f(n))

○ f(n) = Ω(g(n)) , g(n) = O(h(n))

276 PU_2015_394
Let T be a depth first search tree in an undirected graph G. Vertices u and v are leaves of this tree T. The degrees of both u and v are at least 2. Which one of following statements is true?

○ There must be exists of a cycle in G containing u and v

○ There must exist a vertex w whose removal disconnects u and v in G

○ There must exist a cycle in G containing u and its neighbor in G

○ There must exists a vertex w adjacent to both u and v in G

266 PU_2015_394
Expand the acronym AWT.

○ Absolutely Wonderful Toolkit

○ A Web Toolkit

○ Application With Types

○ Abstract Windowing Toolkit

277 PU_2015_394
The depth first traversal of a graph G with n vertices, k edges is marked as tree edges. The number of connected components in G is:-

○ n - k

○ k + 1

○ k

○ n - k - 1

288 PU_2015_394
Which design strategy stops the execution when it finds the solution otherwise starts the problem from top?

○ Back tracking

○ Branch and bound

○ Dynamic programming

○ Divide and conquer

272 PU_2015_394
The height of tree is the length of the longest root-to-leaf path in it. The maximum and minimum number of nodes in a binary tree of height 5 are:-

○ 31 and 5, respectively

○ 32 and 6, respectively

○ 63 and 6, respectively

○ 64 and 5, respectively

273 PU_2015_394
Consider a max heap, represented by the array: 40,30,20,10,15,16,17,8,4.

Array Index	1	2	3	4	5	6	7	8	9
Value	40	30	20	10	15	16	17	8	4

Now consider that a value 35 is inserted into this heap. After insertion, the new heap is:-

○ 40,35,20,10,30,16,17,8,4,15

○ 40,30,20,10,15,16,17,8,4,35

○ 40,30,20,10,35,16,17,8,4,15

○ 40,35,20,10,15,16,17,8,4,30

297 PU_2015_394
OLTP stands for:-

○ Online Transaction Processing

○ Oracle Language Transaction Processing

○ Oracle Lossless Transaction Processing

○ Open Language Transaction Processing

295 PU_2015_394

Kerning of fonts refers to the:-

○ Spacing of a group of characters

○ Spacing between two individual characters

○ Underlining of letters

○ Substitution of fonts in a web page

283 PU_2015_394

The result evaluating the postfix expression $10\ 5 + 60\ 6\ /\ *\ 8 -$ is:-

○ 213

○ 71

○ 284

○ 142

267 PU_2015_394
Which is a reserved word in the Java programming language?

○ Array

○ Native

○ Method

○ Subclass