PU Ph D Banking Technology

205 PU_146-I_New
The maximum internal clock of 8085A is:-

C 3.03 MHz

C 5 MHz

C 6 MHz

C 8.5 MHz

126 PU_2015_146-I
A complete binary tree with property that the value at each node is at least as large as the values at its children is called:-

C Heap

C binary search tree

C AVL tree

C completely balanced tree

174 PU_146-I_New
Using Binary Search technique, what is the maximum number of comparisons needed for a searching an item in an array consisting of 215 elements?

C 9

C 215

C 8

C 108

163 PU_146-I_New
The class of context free language is not closed under:-

C Repeated concatenation

C Intersection

C Union

C Concatenation

208 PU_146-I_New
Which is used to implement the lists of elements have a natural order?

C Trees

C Binary Tree

□ Hash Functions

□ Hash Tables

164 PU_146-I_New
What is meaning for yellow page in directory services?

□ The ability to perform name-to-different-name mappings

□ The ability to perform lookups based on object attributes

□ The ability to map a single name into a set of names

□ The ability to perform straightforward name-to-entry lookups

144 PU_146-I_New
The 8279 require an internal clock frequency of:-

□ 100 KHZ

□ 25 KHZ

□ 50 KHZ

□ 150 KHZ

100 PU_2015_146-I
The operation which is commutative but not associative is:-

□ NAND

□ AND

□ OR

□ EX-OR

155 PU_2015_146-I
In an incompletely specified automata:-

□ from any given state, there can't be any token leading to two different states

□ some states have no transition on some tokens

□ no edge should be labelled epsilon

□ start state may not be there

216 PU_146-I_New
WiMax is:-

□ Wireless Maximization

□ Worldwide Interoperability for Microwave Access

○ Wireless Mac eXtension

○ Wireless Media access eXtension

148 PU_146-I_New
Page stealing:-

○ Is taking page frames from other working sets

○ Is a sign of efficient system

○ Is taking page frames from other memories

○ Is taking larger disk spaces for pages paged out

187 PU_2015_146-I
Which one of the following uses UDP as the transport protocol?

○ SMTP

○ DNS

○ HTTP

○ Telnet

114 PU_2015_146-I
Consider a 4-way set associative cache consisting of 128 lines with a line size of 64 words. The CPU generates a 20-bit address of a word in main memory. The number of bits in the TAG, LINE and WORD fields are respectively:-

○ 9, 6, 5

○ 9, 5, 6

○ 7, 5, 8

○ 7, 7, 6

181 PU_146-I_New
Which of these is not an input to the linker?

○ Object file

○ Bat file

○ Exe file

○ Static libraries

213 PU_146-I_New
In a directed graph, edges are called as:-

○ Nodes

Degree

Sub-graph

Arc

154 PU_146-I_New
An attribute whose value can be calculated from related attribute values is a:-

Multivalued attribute

Derived attribute

Base attribute

Stored attribute

212 PU_146-I_New
In Graph Terminology, the network may also be termed as:-

Two-way graph

Complete graph

Directed graph

Weighted graph

111 PU_2015_146-I
Each cell of a static Random Access Memory contains:-

6 MOS transistors

Two 2-input NORs and One X-NOR gate

4 MOS transistors and 2 capacitors

XOR gates and shift registers

107 PU_2015_146-I
The addressing mode used in an instruction of the form ADD X,Y is:-

immediate

absolute

index

indirect

105 PU_2015_146-I
How many 3 to 8 line decoders with an enable input are needed to construct a 6 to 64 line decoder without using any other logic gates?

○ 10

○ 9

○ 8

○ 7

185 PU_146-I_New

Which of the following contains complete record of all the activities that affected the contents of a database during a certain period of time?

○ SQL

○ 4 GL

○ Oracle

○ d-Base

123 PU_2015_146-I

Minimum number of interchange needed to convert the array 89, 19, 14, 40, 17, 12, 10, 2, 5, 7, 11, 6, 9, 70, into a heap with the maximum element at the root is:-

○ 0

○ 2

○ 1

○ 3

153 PU_146-I_New

Which one can be preferably used when a choice among several alternatives must be made?

○ While condition

○ Case statements

○ If statements

○ Until statement

146 PU_2015_146-I

Inventory is also referred as _____.

○ Machine readable badges

○ Machine readable badges and Electronic Smart Cards

○ Data mining

○ Electronic smart cards

156 PU_146-I_New
A Referential Integrity requires that:-

O Every primary key value will have a matching foreign key value in another table or tables

O Every foreign key value has a matching primary key value in another table or tables, or is null

O No attributes have a null value

O No attributes have null value and foreign key is duplicated

139 PU_146-I_New
In relational database design, a weak entity type is:-

O Ignored and left as it is

O Converted to tables by using the key attribute of the strong entity type as the key of the new table

O Converted to tables by using the combination foreign key and its own key

O Converted to tables by using some combination of its own attributes as primary key

132 PU_2015_146-I
Algorithm which solves the all-pair shortest path problem is:-

O Prim's algorithm

O Floyd's algorithm

O Dijkstra's algorithm

O Warshall's algorithm

102 PU_2015_146-I
The time required for a pulse to decrease from 90 to 10 percent of its maximum value is called:-

O binary level transition period

O decay time

O rise time

O propagation delay

211 PU_2015_146-I
Which of the following is not a type of function?

O injective mapping

O constant mapping

O variable mapping

O bijective mapping

146 PU_146-I_New
Static variables are sometimes called:-

○ Dynamic variables

○ Functional variables

○ Auto variables

○ Class variables

199 PU_146-I_New
The network traffic can be reduced by:-

○ Resending the missed packets

○ Total file transfer

○ Query response method

○ Monitoring

180 PU_2015_146-I
The model which estimates the total effort in terms of person, months of the technical project:-

○ prototyping model

○ COCOMO model

○ spiral model

○ waterfall model

168 PU_146-I_New
Which can be viewed as example(s) of concurrent processing?

○ Overriding

○ Interleaving

○ Overlapping

○ Interleaving and Overlapping

135 PU_2015_146-I
Assuming P ≠ NP, which of the following is TRUE?

○ NP-hard = NP

○ NP-complete ∩ P = Φ

○ NP-complete = NP

○ P = NP-complete

116 PU_2015_146-I
Register renaming is done in pipelined processors:-

○ for efficient access to function parameters and local variables

○ as an alternative to register allocation at compile time

○ to handle certain kinds of hazards

○ as part of address translation

109 PU_2015_146-I
A basic instruction that can be interpreted by a computer generally has:-

○ an address and decoder

○ an operand and an address

○ a decoder and an accumulator

○ sequence register and decoder

161 PU_146-I_New
No sequence is to be imposed on the storage of records in:-

○ Indexed sequential file organization

○ Indexed file organization

○ Sequential file organization

○ Relative file organization

161 PU_2015_146-I
In complier, keywords of a language are recognized during:-

○ dataflow analysis

○ parsing of the program

○ the lexical analysis of the program

○ the code generation

130 PU_2015_146-I
The recurrence relation that arises in relation with the complexity of binary search is:- (Where K is a constant)

○ $T(n) = T(n/2) + \log n$

○ $T(n) = T(n/2) + n$

○ $T(n) = T(n/2) + K$

○ $T(n) = 2T(n/2) + K$

137 PU_2015_146-I
What ability does a computer require in order to pass the standard Turing Test?

🔘 Reasoning

🔘 Computing

🔘 Manipulation of objects

🔘 Vision

189 PU_146-I_New
Which of the following is necessary to preserve the interrelationships between the relations in a database?

🔘 Domain integrity

🔘 Referential integrity

🔘 Entity integrity

🔘 Required data

118 PU_2015_146-I
The function sprintf() works like printf(), but operates on:-

🔘 stderr

🔘 string

🔘 stdin

🔘 data in a file

141 PU_2015_146-I
Decision support programs are designed to help managers make:-

🔘 visual presentations

🔘 business decisions

🔘 problem formation

🔘 budget projections

190 PU_2015_146-I
When a DNS server accepts and uses incorrect information from a host that has no authority giving that information, then it is called:-

🔘 DNS hijacking

🔘 DNS session hijacking

🔘 DNS lookup

□ DNS spoofing

158 PU_146-I_New
Which is the odd in the following?

□ Linked list model

□ Relational model

□ Network model

□ Hierarchical model

120 PU_2015_146-I
Function templates:-

□ may have more than one parameter as long as they are of the same type

□ may not have parameters

□ must have exactly one parameter

□ may have more than one parameters

150 PU_146-I_New
In Semaphores, Special variable of Primitive Signal(s) is/are used:-

□ To communicate a signal

□ To interact a signal

□ To transmit a signal

□ To receive a signal

133 PU_2015_146-I
An element in an array X is called a leader if it is greater than all elements to the right of it in X. The best algorithm to find all leaders in an array:-

□ solves it in time O (n^2)

□ solves it using divide and conquer in time O(n log n)

□ solves it in linear time using a right to left pass of the array

□ solves it in linear time using a left to right pass of the array

159 PU_146-I_New
A relational database which is in 3NF may still have undesirable data redundancy because there may exist:-

□ Non-trivial functional dependencies involving attributes other than prime attributes

□ Non-trivial functional dependencies involving only prime attributes

○ Non-trivial functional dependencies involving all attributes

○ Transitive functional dependencies

142 PU_146-I_New

A technique used to present an image with different intensity values on a display with limited range of output values is called as:-

○ Controlled Display Technique

○ Retracing Technique

○ Sampling Technique

○ Halftoning Technique

204 PU_2015_146-I

The main difference between JK and RS flip-flop is that:-

○ JK flip-flop accepts both inputs as 1

○ JK flip does not need a clock pulse

○ JK flip-flop is Junction cathode multi-vibrator

○ there is feedback in JK flip-flop

104 PU_2015_146-I

Which of the following 4-bit combination are invalid in the BCD code?

○ 0101

○ 1010

○ 0010

○ 1000

128 PU_2015_146-I

Which combination of the integer variables x, y and z makes the variable a get the value 4 in the following expression?

a = (x>y) ? ((x>z) ? x : z) : ((y > z) ? y : z)

○ x = 6, y = 5, z = 3

○ x = 3, y = 4, z = 2

○ x = 5, y = 4, z = 5

○ x = 6, y = 3, z = 5

137 PU_146-I_New

Logical Data Independence is the one in which the following is applicable?

○ Query program changes without altering the base table structure

○ Alterations to data structures with changes only to affected user access programs

○ Multiple primary keys to be utilized

○ Relocation of data without interruption to users

136 PU_146-I_New
If a database is used by multiple users within an organization, it is a kind of:-

○ Segment database

○ Shared database

○ Network database

○ Multi database

140 PU_146-I_New
Which of the following statement is not true with Windows NT security architecture?

○ Delimited password authentication

○ Secure channel security services

○ Windows NT NTLM authentication protocol

○ Kerberos version 5 authentication protocol

196 PU_2015_146-I
Which of the following objects can be used in expressions and scriplets in JSP (Java Server Pages) without explicitly declaring them?

○ session and request only

○ response and session only

○ request and response only

○ session, request and response

167 PU_2015_146-I
Boot strap or vector is called:-

○ primary program

○ main program

○ secondary program

○ grappling hook program

194 PU_146-I_New

A parity check usually can detect:-

◯ Three bit error

◯ Double bit error

◯ Any bit error

◯ One bit error

151 PU_146-I_New
The real time operating system is mainly concentrate on its:-

◯ Waiting time

◯ Latency time

◯ Response time

◯ Processing time

243 PU_146-I_New
The technique of using multiple routes between a single pair of nodes is called _____.

◯ Bifurcated Routing

◯ Centralized Routing

◯ Isolated Routing

◯ Shortest path routing

232 PU_146-I_New
Which of the following data structures are not commonly used in representing graphs?

◯ Adjacency lists

◯ Adjacency Matrices

◯ Arrays

◯ Adjacent Stacks

223 PU_2015_146-I
Fixed partitions:-

◯ are very inefficient in memory utilization

◯ are very efficient in memory utilization

◯ are most used on large mainframe operating systems

◯ are very common in current operating systems

229 PU_146-I_New

COSE refers:-

○ Common Operating System Environment

○ Calculation Of Single Equation

○ Component Oriented Software Engineering

○ Cost Of Software Enrichment

65 of 100
256 PU_2015_146-I
Which of the following statements is false?

○ Every non-deterministic Turin machine can be converted to an equivalent deterministic Turing machine

○ Every NFA can be converted to an equivalent DFA

○ Every regular language is also a context-free language

○ Every subset of a recursively enumerable set is recursive

66 of 100
252 PU_2015_146-I
We have a binary heap on n elements and wish to insert n more elements (not necessarily one after another) into this heap. Total time required for this is:-

○ $\Theta(n \log n)$

○ $\Theta(n^2)$

○ $\Theta(\log n)$

○ $\Theta(n)$

67 of 100
229 PU_2015_146-I
Trojan-Horse programs:-

○ really do not usually work

○ are legitimate programs that allow unauthorized access

○ are hacker programs that do not show up on the system

○ usually are immediately discovered

68 of 100
248 PU_2015_146-I
The order of an algorithm that finds whether a given Boolean function of 'n' variables, produces a 1 is:-

○ linear

○ exponential

○ logarithmic

○ constant

228 PU_146-I_New
RISC stands for:-

◻ Repeated Information Stored Computer

◻ Reduced Information Set Computer

◻ Reduced Instruction Set Computer

◻ Random Information Secured Computer

224 PU_146-I_New
Multiprogramming means:-

◻ There is more than one processor

◻ There are multiple processor and multiple processes

◻ There is only one processor but can be multiple processes running

◻ There is only one processor that processes only one job at a time

248 PU_146-I_New
What is the order of Popping an item of a stack containing 'n' items?

◻ $O(n)$

◻ $O(1)$

◻ $O(2^n)$

◻ $O(Log\ n_2)$

237 PU_146-I_New
When considering database usability issues, what does information density refer to?

◻ The amount of data appearing on the screen

◻ Prompts or text boxes with reminders or alerts

◻ The type of relationship between two entities

◻ Information enabling the user to identify their location in the database

244 PU_146-I_New
Which switching statically reserves the required bandwidth in advance?

◻ Circuit switching

◻ Packet Switching

◻ Mixed Switching

◻ Hybrid Switching

226 PU_2015_146-I
Advantages of COM are:-

◯ compact size, speed

◯ low cost, readability

◯ compact size, readability

◯ readability size, speed

235 PU_2015_146-I
When a subroutine is called, then address of the instruction following the CAL instruction is stored in/on the:-

◯ Program Counter

◯ Accumulator

◯ Stack

◯ Stack pointer

231 PU_2015_146-I
Protection against computer viruses is:-

◯ purchasing up-opened software from vendors

◯ prevention

◯ avoiding free or pirated copies from public sources

◯ practice of safe computing

253 PU_146-I_New
CORBA is abbreviated as:-

◯ Common Object Request Broker Architecture

◯ Common Object Related Broker Architecture

◯ Complementary Object Related Broker Architecture

◯ Clustered Object Request Broker Architecture

244 PU_2015_146-I
When a variable of data type double is converted into float, then:-

◯ the lower order bits are dropped

◯ truncation takes place

◯ rounding takes place

◯ the higher order bits are dropped

239 PU_2015_146-I
Serial access memories are useful in applications where:-

◻ data consists of numbers

◻ data naturally needs to flow in and out in serial form

◻ each stored word is processed differently

◻ short access time is required

239 PU_146-I_New
A microprocessor understand only:-

◻ Binary Code

◻ Hexa Decimal Code

◻ Mnemonic Codes

◻ Decimal Codes

271 PU_2015_146-I
Entity set TRANSACTION has the attributes transaction number, date, amount.
Entity set ACCOUNT has the attributes account number, customer name, balance. Discriminator of the week entity is:-

◻ date

◻ account number

◻ transaction number

◻ {account number, date}

276 PU_2015_146-I
Which of the following statements is true when structure of database file with 20 records is modified?

◻ ?BOF() Prints T

◻ ?BOF() Prints F

◻ ?EOF() Prints F

◻ ? EOF() Prints T

263 PU_146-I_New
Which one of the following cannot be used as a middleware?

◻ TCP/IP

◻ TCP

◻ UDP

RPC

288 PU_2015_146-I
Suppose computers A and B have IP addresses 10.105.1.113 and 10.105.1.91 respectively and they both use the same netmask N. Which of the values of N given below should not be used if A and B should belong to the same network?

◻ 255.255.255.0

◻ 255.255.255.128

◻ 255.255.255.224

◻ 255.255.255.192

284 PU_2015_146-I
On an average, the programmer months is given by 3.6 x $(KLOC)^{1.2}$. If so, a project requiring one thousand source instructions will require:-

◻ 0.0036 M

◻ 3.6 PM

◻ 7.23 PM

◻ 0.36 PM

293 PU_146-I_New
A very practical way to maintain a dictionary is using:-

◻ Hash Functions

◻ Binary tree

◻ Trees

◻ Hash Tables

271 PU_146-I_New
Fragmentation occurs in the case of:-

◻ Linked allocation

◻ Discrete allocation

◻ Contiguous allocation

◻ Indexed allocation

261 PU_146-I_New
Jitter is a:-

◻ Waiting time

○ Speed of light transit time

○ Variation in the packet arrival time

○ Transmission delay

265 PU_146-I_New
The Performance of the pure Slotted Aloha protocol is:-

○ Between 31% to 40%

○ Less than 20 %

○ Between 21% to 30%

○ Between 41% to 50%

267 PU_2015_146-I
Which of the following statement is true?

○ the parsers SLR, Canonical LR and LALR have the same power

○ SLR parser is more powerful than LALR

○ LALR parser is more powerful than Canonical LR parser

○ Canonical LR parser is more powerful than LALR parser

262 PU_2015_146-I
The defining language for developing a formalism in which language definitions can be stated, is called:-

○ syntactic meta language

○ intermediate language

○ decidable language

○ high level language

279 PU_146-I_New
Which of the following agrees with the Virtual memory concept?

○ Page conversion is not possible.

○ Reduces the performance of the system.

○ Memory transaction may be very fast.

○ The process size can exceed total memory size and can still be executed.

280 PU_2015_146-I
Which of the following concurrency control protocols ensure both conflict serializability and freedom from deadlock?

I. 2-phase locking
II. Time-stamp ordering

○ Both I and II

○ Neither I nor II

○ I only

○ II only

275 PU_146-I_New
Why does administrator shuffle files?

○ Provide integrity

○ Provide disk space to system

○ Provide disk space to user

○ Provide security

298 PU_2015_146-I
One method of programming a computer to exhibit human intelligence is called modelling or :

○ psychic amelioration

○ cognitization

○ duplication

○ simulation

287 PU_146-I_New
Splay trees are also called as:-

○ Self-Adjusting search tree

○ Self-adjusting sort tree

○ Adjusting sort tree

○ Adjusting search tree

267 PU_146-I_New
Which one of the following is a first public data network?

○ Token ring

○ Frame Relay

○ X.25

○ ATM

292 PU_2015_146-I
For a 1-Gbps network operating over 4000km, the delay is the limiting factor, not the bandwidth. Consider a MAN with the average source and destination 20 km apart. At what data rate does the round-trip delay due to the speed of light equal the transmission delay for a 1 KB packet?

○ 40 Mbps

○ 48 Mbps

○ 36 Mbps

○ 24 Mbps

296 PU_2015_146-I
Which is not a part of digital certificate?

○ Public key

○ Name

○ Certification Authority

○ Revocation center location URL

281 PU_146-I_New
Ext2 is the standard file system of:-

○ Windows

○ Linux

○ Unix

○ Mac OS