

## Section 1 - Section 1

## Question No.1

4.00

Bookmark 

Consider a hypothetical processor with an instruction of type LW R1, 20(R2), which during execution reads a 32-bit word from memory and stores it in a 32-bit register R1. The effective address of the memory location is obtained by the addition of a constant 20 and the contents of register R2. Which of the following best reflects the addressing mode implemented by this instruction for operand in memory?

- Immediate Addressing
- Register Addressing
- Base Indexed Addressing
- Register Indirect Scaled Addressing

## Question No.2

4.00

Bookmark 

The \_\_\_\_\_ clause is used to list the attributes desired in the result of a query.

- Distinct
- From
- Where
- Select

## Question No.3

4.00

Bookmark 

One day, Ravi walked a distance of 75 metres towards the north. Then he turned left and walked for about 25 metres, he turned left again and walked 80 metres. Finally, he turned to the right at an angle of 45°. In which direction was he moving finally?

- North-east
- South-west
- South-east
- North-west

## Question No.4

4.00

Bookmark 

Which is not Familiar Connectives in First Order Logic?

- and
- or
- iff
- not

## Question No.5

4.00

Bookmark 

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

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

- Neither I nor II
- Both I and II
- II only
- I only

**Question No.6**

4.00

**Bookmark** 

The phenomenon of having a continuous glow of a beam on the screen even after it is removed is called as

- incandescence
- phosphorescence
- fluorescence
- persistence

**Question No.7**

4.00

**Bookmark** 

In a rule based system, procedural domain knowledge is in the form of \_\_\_\_\_.

- Meta rules
- Control rules
- Rule interpreters
- Production rules

**Question No.8**

4.00

**Bookmark** 

The inorder and preorder traversal of a binary tree are **d b e a f c g** and **a b d e c f g**, respectively. The postorder traversal of the binary tree is:

- d e f g b c a
- d e b f g c a
- e d b g f c a
- e d b f g c a

**Question No.9**

4.00

**Bookmark** 

We use dynamic programming approach when

- It's faster than Greedy approach
- It provides optimal solution
- The solution has optimal substructure
- The given problem can be reduced to the 3-SAT problem

**Question No.10**

4.00

**Bookmark** 

All the following hidden surface algorithms employ image space approach except

- scan line method
- depth buffer method
- depth sort method
- Backface removal

**Question No.11**

4.00

**Bookmark** 

Some code optimizations are carried out on the intermediate code because

- The information from the front end cannot otherwise be used for optimization
- the information from dataflow analysis cannot otherwise be used for optimization
- They enhance the portability of the compiler to other target processors
- program analysis is more accurate on intermediate code than on machine code

**Question No.12**

4.00

**Bookmark** 

Page fault occurs

- When a requested page is in memory
- When an exception is thrown
- When a page is corrupted
- When a requested page is not in memory

**Question No.13**

4.00

**Bookmark** 

Tables in second normal form (2NF):

- Eliminate all hidden dependencies
- Eliminate the possibility of a insertion anomalies
- Have all non key fields that depend on the whole primary key
- Have a composite key

**Question No.14**

4.00

**Bookmark** 

What will happen when defining the enumerated type?

- It will not allocate memory to its variables
- It will allocate memory at run time
- It will allocate memory
- It will not allocate memory

**Question No.15**

4.00

**Bookmark** 

The finding of a path from start state to goal state is known as

- Simulation
- Classification
- Search
- Planning

**Question No.16**

4.00

**Bookmark** 

Study the following information carefully and answer the question below it

Lakshman passes through seven lanes to reach his school. He finds that 'Truth lane' is between his house and 'Lie lane'. The third lane from his school is 'Karma lane'. 'Dharma lane' is immediately before the 'Yog lane'. He passes 'Salvation lane' at the end, 'Lie lane' is between 'Truth lane' and 'Dharma lane', the sixth lane from his house is 'Devotion lane'.

How many lanes are there between 'Lie lane' and 'Devotion lane'?

- three
- five
- two
- four

**Question No.17**

4.00

**Bookmark** 

The output of lexical analyser is

- A set of RE
- Syntax Tree
- Set of Tokens
- String Character

**Question No.18**

4.00

**Bookmark** 

The process of digitizing a given picture definition into a set of pixel-intensity for storage in the frame buffer is called

- Rasterization
- Scan conversion
- True color system
- Encoding

**Question No.19**

4.00

**Bookmark** 

Consider the CFG with {S,A,B} as the non-terminal alphabet, {a,b} as the terminal alphabet, S as the start symbol and the following set of production rules

S → aB S → bA

B → b A → a

B → bS A → aS

B → aBB A → bAA

Which of the following strings is generated by the grammar? how many derivation trees are there?

- aaaabb,2
- aabbbb,1
- aabbab,2
- aabbbab,1

**Question No.20**

4.00

**Bookmark** 

The time taken to switch between user and kernel modes of execution be  $t_1$  while the time taken to switch between two processes be  $t_2$ . Which of the following is TRUE?

- nothing can be said about the relation between  $t_1$  and  $t_2$ .
- $t_1 = t_2$
- $t_1 < t_2$
- $t_1 > t_2$

**Question No.21**

4.00

**Bookmark** 

Choose the antonym of the italicized word.

The habit of *squandering* money should not be encouraged.

- hoarding
- collecting
- saving
- discarding

**Question No.22**

4.00

**Bookmark** 

How do you represent "All dogs have tails"

- $\forall x: \text{dog}(x) \rightarrow \text{hastail}(y)$
- $\forall x: \text{dog}(x) \rightarrow \text{hastail}(x)$
- $\forall x: \text{dog}(x) \rightarrow \text{hasatail}(x)$
- $\forall x: \text{dog}(y) \rightarrow \text{hastail}(x)$

**Question No.23**

4.00

**Bookmark** 

In the context of modular software design, which one of the following combinations is desirable?

- Low cohesion and high coupling
- High cohesion and high coupling
- High cohesion and low coupling
- Low cohesion and low coupling

**Question No.24**

4.00

**Bookmark** 

Choose the correct meaning of the italicized idiom.

Raju has a very nice manner, but you would better take what he says *with a grain of salt*.

- To criticize
- To talk sensibly
- To listen to something with considerable doubt
- To complement

**Question No.25**

4.00

**Bookmark** 

In the absolute addressing mode

- The operand is inside the instruction
- The register containing address of the operand is specified inside the instruction
- The location of the operand is implicit
- The address of the operand is inside the instruction

**Question No.26**

4.00

**Bookmark** 

What kind of approach was introduced for elicitation and modelling to give a functional view of the system?

- Use Cases (by Jacobson)
- Object Modeling Technique (by Rumbaugh)
- Object Oriented Design (by Booch)
- Fusion (by Coleman)

**Question No.27**

4.00

**Bookmark** 

Based on the information given answer the following question.

1. In a family of six persons, there are people from three generations. Each has separate professions and they like different colours. There are two couples.
2. Shyam is an Engineer and his wife is not a doctor and she does not like Red colour.
3. Chartered Accountant likes green colour and his wife is a teacher.
4. Manisha is the mother-in-law of Sunita and she likes orange colour.
5. Vimal is the grand father of Tarun and tarun is the Principal and likes black colour.
6. Nyna is the grand daughter of Manisha and she likes blue colour. Nyna's Mother likes white colour.

Who is the Chartered Accountant?

- Manisha
- Vimal
- Nyna
- None of these

**Question No.28**

4.00

**Bookmark** 

Graph Colouring is the \_\_\_\_\_ type of algorithm design strategy

- Dynamic Programming
- Greedy
- Backtracking
- Branch and Bound

**Question No.29**

4.00

**Bookmark** 

Storage mapping is done by

- Linker
- Operating system
- Compiler
- Loader

**Question No.30**

4.00

**Bookmark** 

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

- Generalized modus ponens
- Positive literal
- Negative literal
- Neutral literal

**Question No.31**

4.00

**Bookmark** 

Checking quality of software in both simulated and live environments is known as

- Checking
- Validation
- Usability
- Verification

**Question No.32**

4.00

Bookmark 

\_\_\_\_\_ search is not optimal with respect to space complexity.

- Depth first search
- Iterative Deepening Search
- Breadth first search
- Best first search

**Question No.33**

4.00

Bookmark 

- 1
- 3
- 4
- 2

**Question No.34**

4.00

Bookmark 

It is important to realize that the ties that bind us together in common activity are so \_\_\_\_\_ that they can disappear at any moment.

- tenacious
- tenuous
- restrictive
- tentative

**Question No.35**

4.00

Bookmark 

The amount of ROM needed to implement a 4 bit multiplier is

- 64 bits
- 1 Kbits
- 2 Kbits
- 128 bits

**Question No.36**

4.00

Bookmark 

From which tag descriptive list starts?

- <DS>
- <DL>
- <DD>
- <LL>

**Question No.37**

4.00

Bookmark 

The kind of lists best to answer "The item at position n" is,

- List implemented using Array
- Circular linked list
- Doubly linked lists
- Singly linked list

**Question No.38**

4.00

Bookmark 

Find the odd item

- Opera
- Edge
- Chrome
- Java

**Question No.39**

4.00

Bookmark 

How many undirected graphs (not necessarily connected) can be constructed out of a given set  $V = \{V_1, V_2, \dots, V_n\}$  of n vertices ?

- $n!$
- $n(n-1)/2$
- $2^n$
- $2^{(n(n-1)/2)}$

**Question No.40**

4.00

Bookmark 

Which one of the following task is not done by data link layer?

- Framing
- Flow control
- Channel coding
- Error control

**Question No.41**

4.00

Bookmark 

Study the following information carefully and answer the question below it:

P, Q, R, S T went on a picnic. P is son of Q but Q is not the father of P. R is the son of S, who is the brother of P. T is the wife of S.

How many males are present in the group?

- 3
- 2
- 4
- 1



**Question No.42**

4.00

**Bookmark** 

The intermediate code in .NET framework is called as

- Byte Code
- Soft Code
- MSIL
- None of the these

**Question No.43**

4.00

**Bookmark** 

Which of the following is NOT true of deadlock prevention and deadlock avoidance schemes?

- In deadlock prevention, the request for resources is always granted if the resulting state is safe
- Deadlock avoidance requires knowledge of resource requirements a priori
- Deadlock avoidance is less restrictive than deadlock prevention
- In deadlock avoidance, the request for resources is always granted if the result state is safe

**Question No.44**

4.00

**Bookmark** 

A grammar for a programming language is a formal description of

- Structure
- Syntax
- Semantics
- Library

**Question No.45**

4.00

**Bookmark** 

What is the maximum number of reduce moves that can be taken by a bottom-up parser for a grammar with no epsilon- and unit-production to parse a string with n tokens?

- n/2
- 2^n
- 2n-1
- n-1

**Question No.46**

4.00

**Bookmark** 

Choose the correct meaning of the italicized idiom.

When Peter left he was extremely disappointed. I think he has *gone for good*.

- To a foreign country
- To a good place
- Permanently
- To seek good fortune

**Question No.47**

4.00

**Bookmark** 

If one uses straight two-way merge sort algorithm to sort the following elements in ascending order 20, 47, 15, 8, 9, 4, 40, 30, 12, 17 then the order of these elements after the second pass of the algorithm is:

- 15, 20, 47, 4, 8, 9, 12, 30, 40, 17
- 8, 9, 15, 20, 47, 4, 12, 17, 30, 40
- 8, 15, 20, 47, 4, 9, 30, 40, 12, 17
- 4, 8, 9, 15, 20, 47, 12, 17, 30, 40

## Question No.48

4.00

Bookmark 

A minimum state deterministic finite automaton accepting the language  $L = \{w \mid w \in \{0,1\}^*, \text{ number of 0s and 1s in } w \text{ are divisible by 3 and 5, respectively}\}$  has

- 10 states
- 9 states
- 11states
- 15 states

## Question No.49

4.00

Bookmark 

Choose the best synonym of the italicized word.  
Nobody knew that Sunil had a *sinister* design in marrying her.

- sinful
- selfish
- murderous
- evil

## Question No.50

4.00

Bookmark 

**Statement:** Opening a Library in Achupatti will be a wastage.

**Assumptions:**

I. Inhabitants of Achupatti are illiterate.

II. Inhabitants of Achupatti are not interested in reading

- If only assumption II is implicit
- If both I and II are implicit
- If only assumption I is implicit
- If neither I nor II is implicit

## Question No.51

4.00

Bookmark 

Consider the grammar

$$E \rightarrow E + n \mid E \times n \mid n$$

For a sentence  $n + n \times n$ , the handles in the right-sentential form of the reduction are

- $n, E + n$  and  $E + n \times n$
- $n, E + n$  and  $E + E \times n$
- $n, E + n$  and  $E \times n$
- $n, n + n$  and  $n + n \times n$

## Question No.52

4.00

Bookmark

Consider a pipelined processor with the following four stages:

IF: Instruction Fetch

ID: Instruction Decode and Operand Fetch

EX: Execute

WB: Write Back

The IF, ID and WB stages take one clock cycle each to complete the operation. The number of clock cycles for the EX stage depends on the instruction. The ADD and SUB instructions need 1 clock cycle and the MUL instruction needs 3 clock cycles in the EX stage. Operand forwarding is used in the pipelined processor. What is the number of clock cycles taken to complete the following sequence of instructions?

ADD R2, R1, R0       $R2 \leftarrow R0 + R1$

MUL R4, R3, R2       $R4 \leftarrow R3 * R2$

SUB R6, R5, R4       $R6 \leftarrow R5 - R4$

- 8
- 14
- 10
- 7

**Question No.53**

4.00

**Bookmark** 

Cyclomatic complexity is a \_\_\_\_\_

- Black box testing
- Green box testing
- White box testing
- Yellow box testing

**Question No.54**

4.00

**Bookmark** 

Encapsulation and abstraction are defined as:

- Can be used anyway
- Hiding and hiding respectively
- Binding and hiding respectively
- Hiding and binding respectively

**Question No.55**

4.00

**Bookmark** 

Which of the following is FALSE about abstract classes in Java?

- If we derive an abstract class and do not implement all the abstract methods, then the derived class should also be marked as abstract using 'abstract' keyword
- Abstract classes can have constructors
- A class can inherit from multiple abstract classes
- A class can be made abstract without any abstract method

**Question No.56**

4.00

**Bookmark** 

Study the following information carefully and answer the question below it

The Director of an MBA college has decided that six guest lectures on the topics of Motivation, Decision Making, Quality Circle, Assessment Centre, Leadership and Group Discussion are to be organised on each day from Monday to Sunday.

(i) One day there will be no lecture (Saturday is not that day), just before that day Group Discussion will be organised.

(ii) Motivation should be organised immediately after Assessment Centre.

(iii) Quality Circle should be organised on Wednesday and should not be followed by Group Discussion

(iv) Decision Making should be organised on Friday and there should be a gap of two days between Leadership and Group Discussion

On which day there is no lecture?

- Monday
- Wednesday
- Tuesday
- Sunday

**Question No.57**

4.00

Bookmark 

Macro processor is an inbuilt function of

- Assembler
- Editor
- Linker
- Loader

**Question No.58**

4.00

Bookmark 

A subset of a network that includes all the routers but contains no loops is called

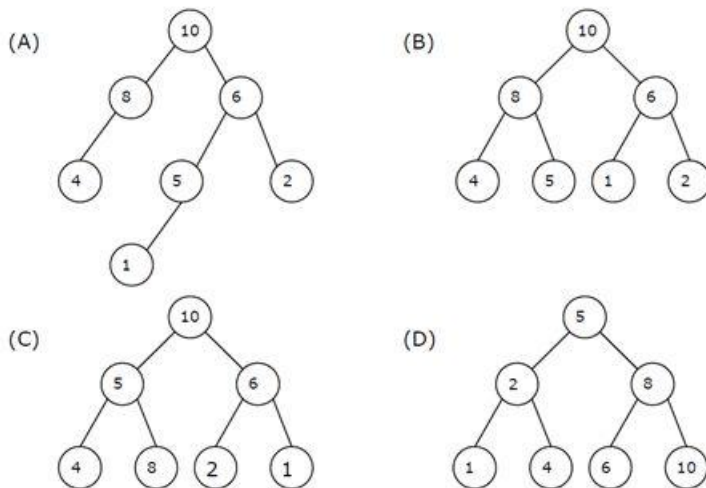
- Spanning tree
- Spider structure
- Spider tree
- Spanning structure

**Question No.59**

4.00

Bookmark 

A max-heap is a heap where the value of each parent is greater than or equal to the values of its children. Which of the following is a max-heap?



- C
- D
- A
- B

**Question No.60**

4.00

Bookmark 

\_\_\_\_\_ she had been lied to, Sally got really angry.

- If Sally discovered
- Sally when discovered
- Having discovered
- Sally discovered

**Question No.61**

4.00

Bookmark 

**Statements:** Stories are True, All true incidents are rumours.

**Conclusion:**

I. Stories are rumours.

II. Rumours are stories

- If only conclusion I follows
- If neither I nor II follows
- If either I or II follows
- If only conclusion II follows

**Question No.62**

4.00

Bookmark 

A point P (5,1) is rotated by  $90^\circ$  about a pivot point (2,2). What is the coordinate of new transformed point P'?

- (1,5)
- (3,5)
- (5,3)
- (2,4)

**Question No.63**

4.00

Bookmark 

Wumpus World is a classic problem, best example of,

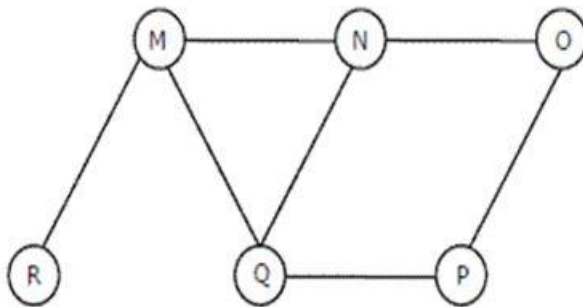
- Reasoning with Knowledge
- Single player Game
- Optimisation problem
- Two player Game

**Question No.64**

4.00

Bookmark 

The Breadth First Search algorithm has been implemented using the queue data structure. One possible order of visiting the nodes of the following graph is



- NQMPOR
- QMNPRO
- QMNPOR
- MNOPQR

**Question No.65**

4.00

Bookmark 

A RAM chip has a capacity of 1024 words of 8 bits each (1K × 8). The number of 2 × 4 decoders with enable line needed to construct a 16K × 16 RAM from 1K × 8 RAM is:

- 5
- 6
- 7
- 4

**Question No.66**

4.00

Bookmark 

Dad often comes home late these days, \_\_\_\_\_?

- isn't it?
- doesn't he?
- is it?
- does he?

**Question No.67**

4.00

Bookmark 

Kotlin is a

- Protocol
- Programming language
- Platform
- None of these

**Question No.68**

4.00

Bookmark 

Transport layer aggregates data from different applications into a single stream before passing it to

- Physical layer
- Application layer
- Data link layer
- Network layer

**Question No.69**

4.00

**Bookmark** 

A\* algorithm is based on

- Breadth-First-Search
- Hill climbing
- Best-First-Search
- Depth-First –Search

**Question No.70**

4.00

**Bookmark** 

In web application domain, RIA stands for

- Rich Information Apps
- Rich Internet Applications
- Rare Internet Apps
- All of these

**Question No.71**

4.00

**Bookmark** 

Psychologist : Neurosis

- Oncologist: Measles
- Kids : Pediatrician
- Opthamologist : Catract
- Dermatologist: Sprain

**Question No.72**

4.00

**Bookmark** 

A system program that combines separately compiled modules of a program into a form suitable for execution is

- Debugger
- Assembler
- Linking Loader
- Cross Compiler

**Question No.73**

4.00

**Bookmark** 

Which of the following addressing modes are suitable for program relocation at run time?

- i. Absolute addressing
- ii. Base Register Addressing
- iii. Relative Addressing
- iv. Indirect Addressing

- (ii) and (iii)
- (i), (ii) and (iv)
- (i) and (iv)
- (i) and (ii)



**Question No.74**

4.00

**Bookmark** 

When trying to access a URL, the following message is displayed on the browser:Server; Error 403  
What could be the reason for the message?

- The requested HTML file is not available
- The requested HTML file or CGI script has insufficient permission.
- The first line of the output from the script is not a valid HTTP header
- The URL refers to a CGI script and the header of the script does not indicate where the interpreter is located

**Question No.75**

4.00

**Bookmark** 

Find the odd one out?

- Chair : Arm
- Flower : Petal
- Circle : Arc
- Cover : Page

**Question No.76**

4.00

**Bookmark** 

How many stacks are needed to implement a queue. Consider the situation where no other data structure like arrays, linked list is available to you.

- 4
- 2
- 1
- 3

**Question No.77**

4.00

**Bookmark** 

Which of the following focuses on the discovery of (previously) unknown properties on the data?

- Data mining
- Data wrangling
- Machine Learning
- Big Data

**Question No.78**

4.00

**Bookmark** 

Consider the following table of arrival time and burst time for three processes P0, P1 and P2.

Process	Arrival time	Burst Time
P0	0 ms	9 ms
P1	1 ms	4 ms
P2	2 ms	9 ms

The pre-emptive shortest job first scheduling algorithm is used. Scheduling is carried out only at arrival or completion of processes.

What is the average waiting time for the three processes?

- 6.33ms
- 5.0 ms
- 7.33ms
- 4.33 ms

**Question No.79**

4.00

Bookmark 

XPath is used to navigate through elements and attributes in \_\_\_\_\_

- XML document
- XHTML document
- XSL document
- XQuery document

**Question No.80**

4.00

Bookmark 

A class IntStack to implement a stack of integers is defined as follows

```
class IntStack {
public:
IntStack();
bool isEmpty();
void push(int item);
int pop();
int top();
}
```

What happens if we execute the following statements?

```
IntStack s;
int n1, n2, n3;
s.push(10);
s.push(123);
s.push(42);
n1 = s.pop();
n2 = s.top();
s.push(n1);
n3 = s.pop();
n1 = s.top();
```

- Stack contains 42 (top), 10 (bottom); n1=42, n2=123, n3=143
- Stack contains 123 (top), 10 (bottom); n1=123, n2=123, n3=42
- Stack contains 42 (top), 42, 123, 10 (bottom); n1=42, n2=42; n3=42
- Stack contains 123 (top), 10 (bottom); n1=42, n2=42, n3=42

**Question No.81**

4.00

Bookmark 

Choose the correct meaning of the italicized idiom.

The party in power *came down* on the side of a flexible and early economic policy to help the weaker sections.

- Decide to go to the corner
- Decide to rebuke severely
- Decide to support
- Decide to speak secretly

Consider the following context-free grammar over the alphabet

$\Sigma = \{a, b, c\}$  with S as the start symbol:

$S \rightarrow abScT \mid abcT$

$T \rightarrow bT \mid b$

Which of the following represents the language generated by the above grammar?

- $\{(ab^n cb^{m_1} cb^{m_2} \dots cb^{m_n} \mid n, m_1, m_2, \dots, m_n \geq 1)\}$
- $\{(ab)^n (cb^m)^n \mid n \geq 1\}$
- $\{(ab)^n (cb)^n \mid n \geq 1\}$
- $\{(ab)^n (cb^m)^n \mid n \geq 1\}$

Which of these is a super class of all errors and exceptions in the Java language?

- Catchable
- RunTimeError
- Throwable
- RunTimeExceptions

**Question No.84**

4.00

**Bookmark** 

A process executes the code

```
fork();
```

```
fork();
```

```
fork();
```

The total number of child processes created is \_\_\_\_\_

- 4
- 3
- 7
- 8

**Question No.85**

4.00

**Bookmark** 

book : \_\_\_\_\_ : : comb : tooth

- Title
- Page
- Cover
- Knowledge

**Question No.86**

4.00

**Bookmark** 

A server at 10% load is having 308 watts power and at 50% load is having 451 watts of power, saving is

- 5.4
- 3.4
- 2.1
- 2.4

**Question No.87**

4.00

**Bookmark** 

John is asked to make an automaton which accepts a given string for all the occurrence of '1001' in it. How many number of transitions would John use such that, the string processing application works?

- 11
- 9
- 15
- 12

**Question No.88**

4.00

**Bookmark** 

Consider the following declaration of a two-dimensional array in C: `char a [100][100]`; Assuming that the main memory is byte-addressable and that the array is stored starting from memory address 0, the address of a `[40][50]` is

- 5050
- 5040
- 4040
- 4050

**Question No.89**

4.00

**Bookmark** 

In Pentium processor, which write buffer is used by the pipeline ALUs in order to write the result to the memory?

- Internal Snoop Write Buffer
- Write-back Buffer
- External Snoop Write Buffer
- Line Replacement Write Buffer

**Question No.90**

4.00

**Bookmark** 

Which of the following is method of JDBC batch process?

- setBatch()
- addBatch()
- deleteBatch()
- removeBatch()

**Question No.91**

4.00

**Bookmark** 

How much number of times the instruction sequence below will loop before coming out of the loop?

A1: MOV AL, 00H INC AL JNZ A1

- 255
- 256
- Will not come out of the loop
- 1

**Question No.92**

4.00

**Bookmark** 

Which testing is the re-execution of some subset of tests that have already been conducted to ensure the changes that are not propagated?

- Integration testing
- Regression testing
- Thread-based testing
- Unit testing

**Question No.93**

4.00

**Bookmark** 

\_\_\_\_\_ partitions data and parity among all N+1 disks, instead of storing data in N-disks and parity in one disk.

- Bit interleaved parity
- Block interleaved parity
- Bit parity
- Block interleaved distributed parity

**Question No.94**

4.00

**Bookmark** 

In Random forest you can generate hundreds of trees (say  $T_1, T_2, \dots, T_n$ ) and then aggregate the results of these tree. Which of the following is true about individual( $T_k$ ) tree in Random Forest?

1. Individual tree is built on a subset of the features
  2. Individual tree is built on all the features
  3. Individual tree is built on a subset of observations
  4. Individual tree is built on full set of observations
- 2 and 4
  - 1 and 3
  - 1 and 4
  - 2 and 3

**Question No.95**

4.00

**Bookmark** 

If a class B network on the Internet has a subnet mask of 255.255.248.0, what is the maximum number of hosts per subnet?

- 1023
- 1022
- 2046
- 2047

**Question No.96**

4.00

**Bookmark** 

Select the Pair that best represents the relationship that is given in the question:

Professor : Erudite

- Entrepreneur : Hardwork
- Carpenter : Furniture
- Mason : Architecure
- Inventor : Imaginative

**Question No.97**

4.00

**Bookmark** 

Let  $L_1$  be a recursive language. Let  $L_2$  and  $L_3$  be languages that are recursively enumerable but not recursive. Which of the following statements is not necessarily true?

- $L_1 - L_3$  is recursively enumerable
- $L_2 \cap L_1$  is recursively enumerable
- $L_2 \cup L_1$  is recursively enumerable
- $L_2 - L_1$  is recursively enumerable

**Question No.98**

4.00

**Bookmark** 

Consider a hash table of size seven, with starting index zero, and a hash function  $(3x + 4) \bmod 7$ . Assuming the hash table is initially empty, which of the following is the contents of the table when the sequence 1, 3, 8, 10 is inserted into the table using closed hashing? Note that '\_' denotes an empty location in the table.

- 1, 10, 8, \_, \_, \_, 3
- 1, \_, \_, \_, \_, \_, 3
- 8, \_, \_, \_, \_, \_, 10
- 1, 8, 10, \_, \_, \_, 3

**Question No.99**

4.00

**Bookmark** 

Which of the following is TRUE?

- Every relation in 3NF is also in BCNF
- Every relation in BCNF is also in 3NF
- A relation R is in 3NF if every non-prime attribute of R is fully functionally dependent on every key of R
- No relation can be in both BCNF and 3NF

**Question No.100**

4.00

**Bookmark** 

The disadvantage of Binary Search is \_\_\_\_\_

- It may not work for floating point numbers
- It may not work for strings
- It has the overhead of sorting
- Its performance depends on the position of the search element in the array