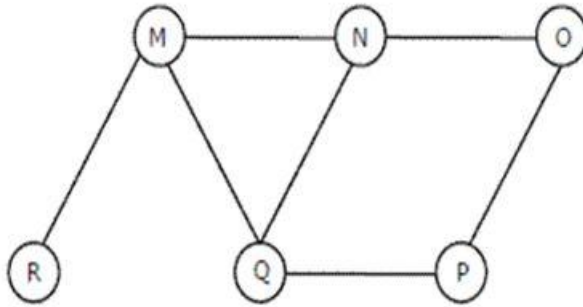## Section 1 - Section 1

Question No.1   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

- ○ QMNPRO
- ○ NQMPOR
- ○ MNOPQR
- ○ QMNPOR

Question No.2   4.00

Bookmark ☐

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

- ○ Cross Compiler
- ○ Assembler
- ○ Linking Loader
- ○ Debugger

Question No.3   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

- ○ 4050
- ○ 5050
- ○ 4040
- ○ 5040

Question No.4   4.00

Let L1 be a recursive language. Let L2 and L3 be languages that are recursively enumerable but not recursive. Which of the following statements is not necessarily true?

    ○ L1 – L3 is recursively enumerable

    ○ L2 – L1 is recursively enumerable

    ○ $L2 \cup L1$ is recursively enumerable

    ○ $L2 \cap L1$ is recursively enumerable

Question No.5   4.00

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

Question No.6   4.00

_____search is not optimal with respect to space complexity.

    ○ Breadth first search

    ○ Iterative Deepening Search

    ○ Best first search

    ○ Depth first search

Question No.7   4.00

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

    ○ incandescence

    ○ persistence

    ○ phosphorescence

    ○ fluorescence

Question No.8

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

Question No.9

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
- ○ Tuesday
- ○ Wednesday
- ○ Sunday

Question No.10

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?

- ○ 2
- ○ 4
- ○ 3
- ○ 1

Question No.11

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.12

4.00

Bookmark ☐

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

- ○ Validation
- ○ Verification
- ○ Checking
- ○ Usability

Question No.13

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?

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

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 not allocate memory
- ○ It will allocate memory

Question No.15

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:

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

- ○ d e f g b c a

Question No.16
4.00

How do you represent "All dogs have tails"

- $\forall x: dog(x) \rightarrow hasatail(x)$

- $\forall x: dog(x) \rightarrow hastail(y)$

- $\forall x: dog(y) \rightarrow hastail(x)$

- $\forall x: dog(x) \rightarrow hastail(x)$

Question No.17
4.00

Consider the grammar
$E \rightarrow E + n \,|\, E \times n \,|\, n$
For a sentence n + n × n, the handles in the right-sentential form of the reduction are

- n, E + n and E + E × n
- n, E + n and E + n × n
- n, n + n and n + n × n
- n, E + n and E × n

Question No.18
4.00

Tables in second normal form (2NF):

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

Question No.19
4.00

Which of the following is method of JDBC batch process?

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

Question No.20
4.00

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

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

Question No.21
4.00

Bookmark ☐

From which tag descriptive list starts?

- ○ <DD>
- ○ <LL>
- ○ <DL>
- ○ <DS>

Question No.22
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
- ○ 15
- ○ 12
- ○ 9

Question No.23
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.24
4.00

Bookmark ☐

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

- ○ From
- ○ Where
- ○ Distinct
- ○ Select

Question No.25
4.00

Bookmark ☐

Select the Pair that best respresents the relationship that is given in the question:
Professor : Erudite

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

Question No.26

Bookmark ☐

4.00

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 URL refers to a CGI script and the header of the script does not indicate where the interpreter is located
- ○ The first line of the output from the script is not a valid HTTP header

Question No.27

Bookmark ☐

4.00

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

- ○ Throwable
- ○ RunTimeExceptions
- ○ Catchable
- ○ RunTimeError

Question No.28

Bookmark ☐

4.00

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

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

Question No.29

Bookmark ☐

4.00

Find the odd one out?

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

Question No.30

Bookmark ☐

4.00

In a rule based system, procedural domain knowledge is in the form of_____.

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

Question No.31 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.32 4.00

Bookmark ☐

Cyclomatic complexity is a _____

○ White box testing

○ Black box testing

○ Yellow box testing

○ Green box testing

Question No.33 4.00

Bookmark ☐

The output of lexical analyser is

○ A set of RE

○ Syntax Tree

○ String Character

○ Set of Tokens

Question No.34 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 45º. In which direction was he moving finally?

○ South-east

○ South-west

○ North-west

○ North-east

Question No.35 4.00

Bookmark ☐

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

○ murderous

○ sinful

○ selfish

○ evil

Question No.36

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

Question No.37

4.00

Bookmark ☐

book : _____ : : comb : tooth

- ○ Knowledge
- ○ Title
- ○ Page
- ○ Cover

Question No.38

4.00

Bookmark ☐

Dad often comes home late these days, _____?

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

Question No.39

4.00

Bookmark ☐

Graph Colouring is the _____type of algorithm design strategy

- ○ Branch and Bound
- ○ Dynamic Programming
- ○ Backtracking
- ○ Greedy

Question No.40

4.00

Bookmark ☐

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

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

Question No.41

4.00

Bookmark ☐

Psychologist : Neurosis

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

Question No.42 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?

○ Thread-based testing

○ Integration testing

○ Regression testing

○ Unit testing

Question No.43 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 Oriented Design (by Booch)

○ Object Modeling Technique (by Rambaugh)

○ Fusion (by Coleman)

Question No.44 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:

○ 8, 15, 20, 47, 4, 9, 30, 40, 12, 17

○ 4, 8, 9, 15, 20, 47, 12, 17, 30, 40

○ 15, 20, 47, 4, 8, 9, 12, 30, 40, 17

○ 8, 9, 15, 20, 47, 4, 12, 17, 30, 40

Question No.45 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.46 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

○ 1

○ Will not come out of the loop

○ 256

○ 255

Question No.47 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 seek good fortune

○ Permanently

○ To a foreign country

○ To a good place

Question No.48

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

Question No.49

Bookmark ☐

Macro processor is an inbuilt function of

- ○ Loader
- ○ Assembler
- ○ Linker
- ○ Editor

Question No.50

Bookmark ☐

_____ she had been lied to, Sally got really angry.

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

Question No.51

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
- ○ n-1
- ○ 2n-1
- ○ 2^n

Question No.52

Bookmark ☐

XPath is used to navigate through elements and attributes in_____

- ○ XHTML document
- ○ XML document

- ○ XQuery document
- ○ XSL document

Question No.53

Bookmark ☐

Page fault occurs

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

Question No.54

4.00

Bookmark ☐

Which is not Familiar Connectives in First Order Logic?

○ not

○ and

○ or

○ iff

Question No.55

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

○ 2047

○ 2046

Question No.56

4.00

Bookmark ☐

Kotlin is a

○ Protocol

○ Programming language

○ Platform

○ None of these

Question No.57

4.00

Bookmark ☐

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

○ (1,5)

○ (2,4)

○ (5,3)

○ (3,5)

Question No.58   4.00

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 dependson 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 <- R0 + R1
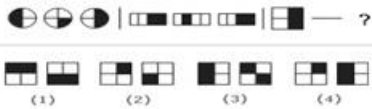MUL R4, R3, R2   R4 <- R3 * R2
SUB R6, R5, R4   R6 <- R5 - R4

○ 14
○ 10
○ 8
○ 7

Question No.59   4.00

The process of digitizing a given picture definition into a set of pixel-intensity for storage in the frame buffer is called
○ Encoding
○ Rasterization
○ True color system
○ Scan conversion

Question No.60

Bookmark ☐

(1)   (2)   (3)   (4)

○ 4

○ 1

○ 2

○ 3

Question No.61
4.00

Bookmark ☐

The time taken to switch between user and kernel modes of execution be t1 while the time taken to switch between two processes be t2. Which of the following is TRUE?

○ t1 > t2

○ t1 < t2

○ nothing can be said about the relation between t1 and t2.

○ t1 = t2

Question No.62
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:

○ 4

○ 5

○ 6

○ 7

Question No.63
4.00

Bookmark ☐

Choose the antonym of the italicized word.
The habit of *squandering* money should not be encouraged.

○ discarding

○ hoarding

○ saving

○ collecting

Question No.64
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.65
4.00

Bookmark ☐

All the following hidden surface algorithms employ image space approach except

○ depth sort method

○ scan line method

○ depth buffer method

○ Backface removal

Question No.66 — 4.00

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?

○ A
○ D
○ B
○ C

Question No.67 — 4.00
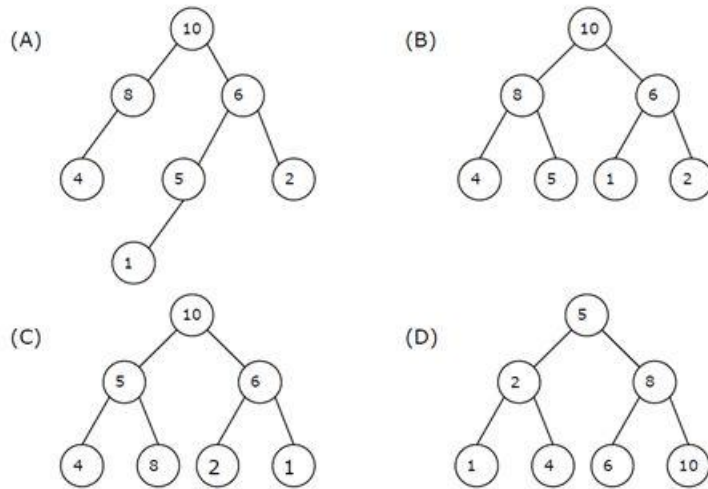
A grammar for a programming language is a formal description of

○ Structure
○ Syntax
○ Semantics
○ Library

Question No.68 — 4.00

We use dynamic programming approach when

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

Question No.69 — 4.00

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

○ Abstract classes can have constructors
○ A class can inherit from multiple abstract classes
○ 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
○ A class can be made abstract without any abstract method

Question No.70

Bookmark ☐

4.00

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

- ○ restrictive
- ○ tenuous
- ○ tentative
- ○ tenacious

Question No.71

Bookmark ☐

4.00

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
- ○ Base Indexed Addressing
- ○ Register Addressing
- ○ Register Indirect Scaled Addressing

Question No.72

Bookmark ☐

4.00

The interemediate code in .NET framework is called as

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

Question No.73

Bookmark ☐

4.00

In Random forest you can generate hundreds of trees (say T1, T2 …..Tn) and then aggregate the results of these tree. Which of the following is true about individual(Tk) 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 3
- ○ 1 and 3
- ○ 1 and 4
- ○ 2 and 4

Question No.74

Bookmark ☐

4.00

In the absolute addressing mode

- ○ The address of the operand is inside the instruction
- ○ 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

Question No.75   4.00

Wumpus World is a classic problem, best example of,
- ○ Reasoning with Knowledge
- ○ Single player Game
- ○ Optimisation problem
- ○ Two player Game

Question No.76   4.00

A* algorithm is based on
- ○ Depth-First –Search
- ○ Breadth-First-Search
- ○ Best-First-Search
- ○ Hill climbing

Question No.77   4.00

A server at 10% load is having 308 watts power and at 50% load is having 451 watts of power, saving is
- ○ 2.4
- ○ 2.1
- ○ 5.4
- ○ 3.4

Question No.78   4.00

How many undirected graphs (not necessarily connected) can be constructed out of a given set V= $\{V_1, V_2,\ldots V_n\}$ of n vertices ?
- ○ $n!$
- ○ $2^{\wedge}(n(n-1)/2)$
- ○ n(n-l)/2
- ○ $2^{\wedge}n$

Question No.79   4.00

In web application domain, RIA stands for
- ○ Rich Information Apps
- ○ Rich Internet Applications
- ○ Rare Internet Apps
- ○ All of these

Question No.80   4.00

In Pentium processor, which write buffer is used by the pipeline ALUs in order to write the result to the memory?
- ○ Line Replacement Write Buffer
- ○ Internal Snoop Write Buffer
- ○ External Snoop Write Buffer
- ○ Write-back Buffer

Question No.81
4.00

Bookmark ☐

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

○ Big Data

○ Data wrangling

○ Data mining

○ Machine Learning

Question No.82
4.00

Bookmark ☐

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

○ Simulation

○ Classification

○ Search

○ Planning

Question No.83
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 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 42 (top), 10 (bottom); n1=42, n2=123, n3=143

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

Question No.84
4.00

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?

- ○ $\{(ab)^n (cb^m)^n \mid n >= 1 \}$

- ○ $\{(ab)^n (cb^m)^n \mid n >= 1 \}$

- ○ $\{(ab^n cb^m{}_1 cb^m{}_2 \ldots cb^m{}_n \mid n, m_1, m_2, \ldots, m_n >= 1 \}$

- ○ $\{(ab)^n (cb)^n \mid n >= 1 \}$

Question No.85
4.00

Storage mapping is done by
- ○ Loader
- ○ Operating system
- ○ Compiler
- ○ Linker

Question No.86
4.00

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

Question No.87
4.00

Consider a hash table of size seven, with starting index zero, and a hash function (3x + 4) mod7. 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, _, _, _, _, _,3
- ○ 1, 10, 8, _, _, _, 3
- ○ 8, _, _, _, _,_, 10
- ○ 1, 8, 10, _, _, _, 3

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?

○ 5.0 ms

○ 6.33ms

○ 4.33 ms

○ 7.33ms

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 talk sensibly

○ To criticize

○ To complement

○ To listen to something with considerable doubt

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 (ii)

○ (i) and (iv)

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

○ List implemented using Array

○ Doubly linked lists

○ Circular linked list

○ Singly linked list

Question No.92   4.00

Bookmark ☐

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

○ High cohesion and low coupling

○ High cohesion and high coupling

○ Low cohesion and high coupling

○ Low cohesion and low coupling

Question No.93   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'?

○ two

○ five

○ three

○ four

Question No.94   4.00

Bookmark ☐

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

○ 10 states

○ 9 states

○ 15 states

○ 11states

Question No.95   4.00

Bookmark ☐

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

○ Positive literal

○ Neutral literal

○ Generalized modus ponens

○ Negative literal

Question No.96   4.00

Bookmark ☐

Find the odd item

○ Edge

○ Chrome

○ Opera

○ Java

Question No.97   4.00

Bookmark ☐

A process executes the code
fork();
fork();
fork();
The total number of child processes created is_____

- ○ 4
- ○ 8
- ○ 3
- ○ 7

Question No.98   4.00

Bookmark ☐

Encapsulation and abstraction are defined as:

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

Question No.99   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

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

Question No.100   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.

- ○ 3
- ○ 1
- ○ 4
- ○ 2