

Section 1 - Section 1**Question No.1**

4.00

Bookmark

Identify the correct order in which a server process must invoke the function calls accept, bind, listen, and recv according to UNIX socket API.

- listen, accept, bind, recv
- accept, listen, bind, recv
- bind, accept, listen, recv
- bind, listen, accept, recv

Question No.2

4.00

Bookmark

Services to support Database management system in any cloud based system should be part of

- Software as a Service (SaaS)
- Platform as a Service (PaaS)
- Enterprise as a Service (EaaS)
- Infrastructure as a Service (IaaS)

Question No.3

4.00

Bookmark

A formal grammar is a _____ for rewriting strings.

- Set of rules
- Set of languages
- Set of functions
- Both a & b

Question No.4

4.00

Bookmark

Choose the correct meaning of the italicized idiom.

He had great difficulty to *save his bacon* when he was blackmailed.

- Save pork
- Threaten somebody
- Escape death
- Put bacon in the refrigerator

Question No.5

4.00

Bookmark

An attribute or set of attributes within one relation that matches the candidate key of some (possibly the same) relation.

- Candidate key
- Super key
- Primary key
- Foreign key

Question No.6

4.00

Bookmark

Which of the following permutation can be obtained in the output (in the same order) using a stack assuming that the input is the sequence 1, 2, 3, 4, 5 in that order?

- 3, 4, 5, 1, 2
- 1, 5, 2, 3, 4
- 5, 4, 3, 1, 2
- 3, 4, 5, 2, 1

Question No.7

4.00

Bookmark

Choose the correct meaning of the italicized idiom.
Sheela's work seems to be a *Penelope's web*.

- Declining
- In her best form
- Endless
- Difficult

Question No.8

4.00

Bookmark

Internet of Things needs a lot of network connection. What is the proposed "white Space" radio standard called?

- Zigbee
- Weightless
- WiMax
- Bluetooth

Question No.9

4.00

Bookmark

In the transfer of file between server and client, if the transmission rates along the path is 10Mbps, 20Mbps, 30Mbps, 40Mbps. The throughput is usually ____ .

- 10Mbps
- 40Mbps
- 50Mbps
- 20Mbps

Question No.10

4.00

Bookmark

Write the regular expression to denote the language $L = \{ a, b \}$ such that all the string do not contain the substring "ab".

- a^*b^*
- b^*a^*
- $(ab)^*$
- All of these

Question No.11

4.00

Bookmark

An algorithm A is admissible if

- It returns more solutions, but not an optimal one
- It is guaranteed to return an optimal solution when one exists
- It guarantees to return more optimal solutions
- It is not guaranteed to return an optimal solution when one exists

Question No.12

4.00

Bookmark

What is the worstcase time complexity of Build Heap operation. Build Heap is used to build a max(or min) binary heap from a given array. Build Heap is used in Heap Sort as a first step for sorting.

- $O(\text{Log}n)$
- $O(n)$
- $O(n\text{Log}n)$
- $O(n^2)$

Question No.13

4.00

Bookmark

Which one of the following assertions concerning code inspection and code walkthrough is true?

- Code inspection and code walkthrough are synonyms
- Code walkthrough is usually carried out by an independent test team
- Code inspection is carried out once the code has been unit tested
- Adherence to coding standards is checked during code inspection

Question No.14

4.00

Bookmark

Which is also called Single inference Rule?

- Resolution
- Reform
- Reference
- Conjunctive normal form

Question No.15

4.00

Bookmark

Which of the following is/are example(s) of stateful application layer protocols?

(i) HTTP (ii) FTP (iii) TCP (iv) POP3

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

Question No.16

4.00

Bookmark

A processor has 40 distinct instructions and 24 general purpose registers. A 32-bit instruction word has an opcode, two register operands and an immediate operand. The number of bits available for the immediate operand field is _____.

- 32
- 16
- 12
- 8

Question No.17

4.00

Bookmark

Identify the underlined part of speech:

Sorry, I don't know any foreign languages

- adjective
- pronoun
- adverb
- noun

Question No.18

4.00

Bookmark

In a binary max heap containing n numbers, the smallest element can be found in time _____.

- O(1)
- O(logn)
- O(log²n)
- O(n)

Question No.19

4.00

Bookmark

Find out the missing term:

1, 2, 3, 6, 11, 20, 37, 68, ?

- 125
- 105
- 126
- 124

Question No.20

4.00

Bookmark

Ramesh had a cold and couldn't go to the party, so I bought him a cake to make up for his_____

- depression
- disappointment
- disgust
- disillusion

Question No.21

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
- 2
- 4

Question No.22

4.00

Bookmark

Consider an undirected random graph of eight vertices. The probability that there is an edge between a pair of vertices is $1/2$. What is the expected number of unordered cycles of length three?

- 7
- 0
- 1
- 8

Question No.23

4.00

Bookmark

Choose the missing term: 3F,6G,11I,18L, ?

- 27P
- 28Q
- 26N
- 27O

Question No.24

4.00

Bookmark

In fixed sized partition, the degree of multi programming is bounded by _____.

- the number of partitions
- the CPU utilization
- the memory size
- all of the mentioned

Question No.25

4.00

Bookmark

In the worst case, the number of comparisons needed to search a singly linked list of length n for a given element is

- $\log 2n$
- n
- $n - 1$
- $n/2$

Question No.26

4.00

Bookmark

What is the output of a lexical analyzer?

- Intermediate Code
- A parse Tree
- A list of tokens
- Machine code

Question No.27

4.00

Bookmark

Which of these keywords is not a part of exception handling?

- try
- finally
- throws
- thrown

Question No.28

4.00

Bookmark

If files are organized so that the ordering of data records is the same as or close to the ordering of data entries in some index. Then that index is called

- Unclustered
- Clustered
- Dense
- Sparse

Question No.29

4.00

Bookmark

Input of Lex is?

- ASCII data
- statements
- Set of regular expression
- Numeric data

Question No.30

4.00

Bookmark

Which of the below is an invalid identifier with main method?

- Final
- Public
- Static
- Private

Question No.31

4.00

Bookmark

In which addressing mode the operand is given explicitly in the instruction?

- Immediate mode
- Index mode
- Absolute mode
- Indirect mode

Question No.32

4.00

Bookmark

Match the following:

List - I

(P) Prim's algorithm for minimum spanning tree

(Q) Floyd-Warshall algorithm for all pairs shortest paths

(R) Mergesort

(S) Hamiltonian circuit

List - II

- (i) Backtracking
- (ii) Greedy method
- (iii) Dynamic programming
- (iv) Divide and conquer

- P-iii, Q-ii, R-iv, S-i
- P-i, Q-ii, R-iv, S-iii
- P-ii, Q-i, R-iii, S-iv
- P-ii, Q-iii, R-iv, S-i

Question No.33

4.00

Bookmark

Which of the following term is best defined by the statement: "When one object invokes another independent object, a message is passed between the two objects."?

- Control coupling
- Stamp coupling
- External coupling
- Data coupling

Question No.34

4.00

Bookmark

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

- error control
- channel coding
- framing
- flow control

Question No.35

4.00

Bookmark

Statements: Some bats are snakes, No snake is dangerous

Conclusion:

I. Some dangerous animals are snakes

II. Some bats are not dangerous.

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

Question No.36

4.00

Bookmark

Based on the given information, answer the following question.

1. Six friends P,Q,R,S,T and U are members of a club and play different games of Football, Cricket, Tennis, Basketball, Badminton and Volleyball
2. T who is taller than P and S plays Tennis.
3. The tallest among them plays Basketball.
4. The Shortest among them plays volleyball.
5. Q and S neither play Volleyball nor Basketball.
6. R plays Volleyball
7. T is between Q who plays Football and P in order of height

What does S Play?

- Cricket
- Badminton
- Either Cricket or Badminton
- None of the above

Question No.37

4.00

Bookmark

Which one of the following protocols is NOT used to resolve one form of address to another one?

- RARP
- DNS
- ARP
- DHCP

Question No.38

4.00

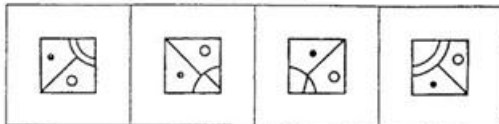
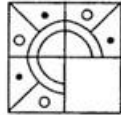
Bookmark

MQTT is a _____ protocol.

- Machine Things
- Internet of Things
- Machine to Machine and Internet of Things
- Machine to Machine

Question No.39

4.00

Bookmark 

- (A) (B) (C) (D)
- D
 - B
 - C
 - A

Question No.40

4.00

Bookmark

Good restaurants serving pure vegetarian food are very hard to _____.

- go through
- come by
- take to
- get in

Question No.41

4.00

Bookmark

Which one of the following is a transport layer protocol used in internet?

- TCP
- UDP
- Both (a) and (b)
- None of the mentioned

Question No.42

4.00

Bookmark

Which one of the following is NOT a part of the ACID properties of database transactions?

- Consistency
- Atomicity
- Deadlock-freedom
- Isolation

Question No.43

4.00

Bookmark

Which of the following options is/are true for K-fold cross-validation?

- i. Increase in K will result in higher time required to cross validate the result.
 - ii. Higher values of K will result in higher confidence on the cross-validation result as compared to lower value of K.
 - iii. If $K=N$, then it is called Leave one out cross validation, where N is the number of observations.
- 1,2 and 3
 - 1 and 3
 - 1 and 2
 - 2 and 3

Question No.44

4.00

Bookmark

Which one of the following fields of an IP header is NOT modified by a typical IP router?

- Checksum
- Time to Live (TTL)
- Source address
- Length

Question No.45

4.00

Bookmark

Which of the following provider rely on virtual machine technology to deliver servers?

- IaaS
- CaaS
- AaaS
- PaaS

Question No.46

4.00

Bookmark

Which of the following is /are modern programming language(s)?

- Kotlin
- Julia
- Haxe
- All of these

Question No.47

4.00

Bookmark

When is a resolution called as refutation-complete?

- Sentence is satisfiable
- Sentence is unsatisfiable
- Sentence remains the same
- None of the mentioned

Question No.48

4.00

Bookmark

Select the option which improves the underlined part of the sentences.

The Prime Minister called on the President.

- No improvement
- to
- in
- by

Question No.49

4.00

Bookmark

Which of the following is a recent development in Machine Learning?

- Sound Learning
- Deep Learning
- Wave Learning
- Meta Learning

Question No.50

4.00

Bookmark

Assume that for a certain processor, a read request takes 50 nanoseconds on a cache miss and 5 nanoseconds on a cache hit. Suppose while running a program, it was observed that 80% of the processor's read requests result in a cache hit. The average read access time in nanoseconds is _____.

- 1.4
- 1.3
- 14
- 13

Question No.51

4.00

Bookmark

A processor can support a maximum memory of 4 GB, where the memory is word-addressable (a word consists of two bytes). The size of the address bus of the processor is at least _____ bits.

- 33
- 32
- 31
- 35

Question No.52

4.00

Bookmark

Obtain the missing term.

300, 296, 287, 271, ?, 210

- 246
- 250
- 244
- None of the above

Question No.53

4.00

Bookmark

An AI technique that allows computers to understand associations and relationships between objects and events is called:

- Heuristic processing
- Pattern matching
- Cognitive science
- Relative symbolism

Question No.54

4.00

Bookmark

What property of the files prevents sharing of files and directories?

- Tree structure
- Length
- Two Level Structure
- One Level Structure

Question No.55

4.00

Bookmark

A single array $A[1..MAXSIZE]$ is used to implement two stacks. The two stacks grow from opposite ends of the array. Variables $top1$ and $top2$ ($top1 < top2$) point to the location of the topmost element in each of the stacks. If the space is to be used efficiently, the condition for "stack full" is:

- $top1 = top2 - 1$
- $top1 + top2 = MAXSIZE$
- ($top1 = MAXSIZE/2$) and ($top2 = MAXSIZE/2 + 1$)
- ($top1 = MAXSIZE/2$) or ($top2 = MAXSIZE$)

Question No.56

4.00

Bookmark

Assertion: - India's president is appointed on a five-year term

Reason: -PratibhaPatil was appointed as India's first woman president in 2007

- Both A and R are true and R is the correct explanation of A
- A is true but R is false
- A is false but R is true
- Both A and R are true and R is not the correct explanation of A

Question No.57

4.00

Bookmark

In orthographic projection, the object is placed with one of its faces _____ to the picture plane.

- Inclined
- Perpendicular
- Parallel
- Any of the above

Question No.58

4.00

Bookmark

The network layer concerns with _____ .

- bits
- frames
- packets
- none of the mentioned

Question No.59

4.00

Bookmark

The disadvantage of invoking the detection algorithm for every request is :

- consumption of memory
- excessive time consumption for memory allocation
- considerable overhead in computation time
- all of the above mentioned

Question No.60

4.00

Bookmark

Choose the best synonym of the italicized word.

Each one of us is the subject of *derision* at some time or the other in our life.

- irony
- laughter
- criticism
- ridicule

Question No.61

4.00

Bookmark

To set up the window to capture all Click events, which of the following statement is used ?

- window.captureEvents(Event.CLICK);
- window.raiseEvents(Event.CLICK);
- window.handleEvents (Event.CLICK);
- window.routeEvents(Event.CLICK);

Question No.62

4.00

Bookmark

_____ are also known as generic pointers, which refer to variables of any type.

- this pointer
- base pointer
- void pointer
- null pointer

Question No.63

4.00

Bookmark

Which of the following model includes a backward elimination feature selection routine?

- MCV
- MARS
- MCRS
- All of the Mentioned

Question No.64

4.00

Bookmark

The preorder traversal sequence of a binary search tree is 30, 20, 10, 15, 25, 23, 39, 35, 42. Which one of the following is the post order traversal sequence of the same tree?

- 10, 20, 15, 23, 25, 35, 42, 39, 30
- 15, 10, 23, 25, 20, 35, 42, 39, 30
- 15, 10, 25, 23, 20, 42, 35, 39, 30
- 15, 20, 10, 23, 25, 42, 35, 39, 30

Question No.65

4.00

Bookmark

An assembler is

- Data dependent
- Machine dependent
- Programming language dependent
- Syntax dependent

Question No.66

4.00

Bookmark

Which of the following strings is not generated by the following grammar? $S \rightarrow SaSbS|ε$.

- aababb
- aaabb
- aabb
- abab

Question No.67

4.00

Bookmark

The statement that is executed automatically by the system as a side effect of the modification of the database is:

- backup
- recovery
- trigger
- assertion

Question No.68

4.00

Bookmark

The finite automata accept the following language:

- Context Free Language
- Context Sensitive Language
- Regular Language
- None of these

Question No.69

4.00

Bookmark

Consider a non-pipelined processor with a clock rate of 2.5 gigahertz and average cycles per instruction of four. The same processor is upgraded to a pipelined processor with five stages; but due to the internal pipeline delay, the clock speed is reduced to 2 gigahertz. Assume that there are no stalls in the pipeline. The speed up achieved in this pipelined processor is _____.

- 4
- 3
- 4.2
- 3.2

Question No.70

4.00

Bookmark

The minimum number of JK flip-flops required to construct a synchronous counter with the count sequence (0,0,1,1,2,2,3,3,0,0,...) is _____.

- 3
- 2
- 1
- 4

Question No.71

4.00

Bookmark

All of the following accurately describe Hadoop, EXCEPT:

- Real Time
- Distributed Computing
- Open Source
- Java Based

Question No.72

4.00

Bookmark

A software requirements specification (SRS) document should avoid discussing which one of the following?

- Design specification
- Non-functional requirements
- User interface issues
- Interfaces with third party software

Question No.73

4.00

Bookmark

The width of the physical address on a machine is 40 bits. The width of the tag field in a 512 KB 8-way set associative cache is ____ bits.

- 44
- 14
- 34
- 24

Question No.74

4.00

Bookmark

_____ is obviously infinite language.

- Factorial
- Palindrome
- Equal-Equal
- Even-Even

Question No.75

4.00

Bookmark

Time quantum is defined in_____.

- shortest job scheduling algorithm
- round robin scheduling algorithm
- multilevel queue scheduling algorithm
- priority scheduling algorithm

Question No.76

4.00

Bookmark

Which of the following is a recent cyber security issue that affected many systems across the globe?

- WannaLaugh
- Wannacry
- Deepcry
- None of the these

Question No.77

4.00

Bookmark

Which is a refutation complete inference procedure for propositional logic?

- Clauses
- Proposition
- Variables
- Propositional resolution

Question No.78

4.00

Bookmark

Which of the following function provides unsupervised prediction?

- cl_forecast
- cl_precast
- cl_nowcast
- cl_predict

Question No.79

4.00

Bookmark

Which level of RAID refers to disk mirroring with block striping?

- RAID Level 3
- RAID Level 4
- RAID Level 2
- RAID Level 1

Question No.80

4.00

Bookmark

What is the peculiarity of red black trees?

- In red-black trees, the leaf nodes are not relevant and do not contain data.
- They are not self balancing
- In red-black trees, the root do not contain data.
- In red-black trees, the leaf nodes are relevant and contain data.

Question No.81

4.00

Bookmark

In the PL/SQL, the package specification contains _____ declarations.

- Friend
- Private
- Public
- Protected

Question No.82

4.00

Bookmark

Given the following statements:

S1: A foreign key declaration can always be replaced by an equivalent check assertion in SQL. S2: Given the table R (a, b, c) where a and b together form the primary key, the following is a valid table definition. CREATE TABLE S (a INTEGER, d INTEGER, e INTEGER, PRIMARY KEY (d), FOREIGN KEY (a) references R).Which one of the above statements is CORRECT?

- S1 is FALSE and S2 is TRUE
- S1 is TRUE and S2 is FALSE
- Both S1 and S2 are FALSE
- Both S1 and S2 are TRUE

Question No.83

4.00

Bookmark

The concept of FA is much used in this part of the compiler :

- Parser
- Lexical Analyzer
- Code Generation
- Code Optimization

Question No.84

4.00

Bookmark

The security of android applications are governed by

- App Size
- App Permissions
- Protocols
- None of the above

Question No.85

4.00

Bookmark

In a Rule based system, procedural domain knowledge is in the form of _____.

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

Question No.86

4.00

Bookmark

Choose the best antonym of the italicized word.
Ravi and Raghu are really *obstinate* men.

- understanding
- friendly
- compliant
- considerate

Question No.87

4.00

Bookmark

Which of the following cloud concept is related to pooling and sharing of resources?

- QoS
- Virtualization
- Polymorphism
- Abstraction

Question No.88

4.00

Bookmark

Personal consultant knowledge bases contain information in the form of _____.

- Parameters
- Contexts
- Production rules
- All of the above

Question No.89

4.00

Bookmark

In a code language, 321 means "Hot Black Coffee", 536 means "Very Hot Summer", and 589 means "Summer and Winter". Which digit stands for "Very" ?

- 5
- 6
- 9
- 3

Question No.90

4.00

Bookmark

Choose the correct meaning of the italicized idiom.
Anil got me into trouble by giving a *false colour* to my statement.

- Giving a wrong character
- Giving good impression
- Colouring the sentence
- Giving a wrong colour box

Question No.91

4.00

Bookmark

Let X be a recursive language and Y be a recursively enumerable but not recursive language. Let W and Z be two languages such that Y reduces to W, and Z reduces to X (reduction means the standard many-one reduction). Which one of the following statement is TRUE?

- W is not recursively enumerable and Z is not recursive
- W can be recursive and Z is recursively enumerable.
- W can be recursively enumerable and Z is recursive.
- W is not recursively enumerable and Z is recursive.

Question No.92

4.00

Bookmark

It takes eight hours for a 600 km journey, if 120 km is done by train and the rest by car. It takes 20 minutes more, if 200 km is done by train and the rest by car. The ratio of the speed of the train to that of the cars is:

- 2:3
- 3:4
- 1:2
- 1:4

Question No.93

4.00

Bookmark

An accurate and efficient raster line-generating algorithm is _____.

- Bresenham's line algorithm
- Mid-point algorithm
- Parallel line algorithm
- DDA algorithm

Question No.94

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

How many lectures are organised between Motivation and Quality Circle?

- Two
- Four
- Three
- One

Question No.95

4.00

Bookmark

Let the class of language accepted by finite state machine be L_1 and the class of languages represented by regular expressions be L_2 then:

- $L_1 \cup L_2 = *$
- $L_1 = L_2$
- $L_1 < L_2$
- $L_1 \geq L_2$

Question No.96

4.00

Bookmark

When a function is recursively called all the automatic variables are stored in a _____ .

- Linked List
- Queue
- Array
- Stack

Question No.97

4.00

Bookmark

Which one of the following is an application of Queue Data Structure?

- Resource sharing among multiple consumers.
- Asynchronous data transfer between two processes
- Load Balancing
- All of these

Question No.98

4.00

Bookmark

Which one of the following is NOT necessarily a property of a Group?

- Existence of identity
- Commutative
- Existence of inverse for every element
- Associative

Question No.99

4.00

Bookmark

Based on the information given, answer the below question.

1. A,B,C,D,E and F are travelling in a bus.
2. There are two reporters, two mechanics, one photographer and one writer in the group.
3. Photographer A is married to D who is a reporter.
4. The writer is married to B who is of the same profession as that of F.
5. A,B,C,D are two married couples and no one in this belong to the same profession.
6. F is the brother of C.

How is C related to F?

- Brother
- Brother-in-law
- Sister
- Cannot be determined

Which of the following statements are TRUE about an SQL query?

P : An SQL query can contain a HAVING clause even if it does not have a GROUP BY clause

Q : An SQL query can contain a HAVING clause only if it has a GROUP BY clause

R : All attributes used in the GROUP BY clause must appear in the SELECT clause

S : Not all attributes used in the GROUP BY clause need to appear in the SELECT clause

- Q and S
- P and R
- P and S
- Q and R