The number of independent paths in a program can be found by computing the __________.

- Binary search routine
- Input sequence
- Cyclomatic Complexity
- Equivalence partitions

In the process of fetching a web page from a server the HTTP request/response takes ______ round trip time.

- 2
- 3
- 1
- 4

The Windows OS equivalent of the POSIX open command is:

- CloseHandle
- ReadFile
- CreateFile
- WriteFile

Which of the following algorithm design technique is used in the quick sort algorithm?

- Backtracking
- Dynamic programming
- Greedy method
- Divide and conquer

It is best to use __________ for a well understood data processing application.

- The waterfall model
- prototyping model
- the evolutionary model
the spiral model

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190 PU_2015_370
User mode is also called:
- Monitor mode
- System mode
- Supervisor mode
- Privileged mode

7 of 100
166 PU_2015_370
Which OS strategy popularized the idea personal productivity tools, bitmap graphics, and virtual terminals?
- Personal computers and workstations systems
- Timesharing system
- Batch processing system
- Real-time systems

8 of 100
196 PU_2015_370
List out which is not a I/O Controller:
- I/O Controller
- Program controlled I/O
- Data Controller I/O
- Interrupt controller I/O

9 of 100
213 PU_2015_370
A computer with interrupts usually includes instructions to enable/disable interrupts:
- to synchronize the CPU operation with the power cycle
- to prevent overhead due to slow devices
- to enable the OS to ignore rogue devices
- to prevent race conditions in the kernel

10 of 100
116 PU_2015_370
If 5 files are transferred from server A to client B in the same session. The number of TCP connection between A and B is:
- 3
- 4
11 of 100
123 PU_2015_370
Which of the following digits are known as the terminal number of the Network User Address (NUA)?
- 5-7
- 1-4
- 8-12
- 13-14

12 of 100
143 PU_2015_370
The Worst case occur in linear search algorithm when:-
- Item is the last element in the array
- Item is somewhere in the middle of the array
- Item is the last element in the array or is not there at all
- Item is not in the array at all

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192 PU_2015_370
The fetch-execute algorithm:-
- describes the operation of a von Neumann computer
- describes the operation of the CPU
- describes the operation of the ALU
- describes the operation of the control unit

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147 PU_2015_370
In the maintenance phase the product must be tested against previous test cases. This is known as ________ testing.
- Beta.
- Regression
- Integration
- Module

15 of 100
106 PU_2015_370
In which model the requirements are implemented by category?
- Evolutionary Development Model
Which of the following is not correct?
- Web cache doesn't have its own disk space
- Web cache contains copies of recently requested objects
- Web cache might reduce the response time
- Web cache can act both like server and client

The desired level of coupling is:
- Data coupling
- Common coupling
- No coupling
- Control coupling

No. of bits per symbol used in Baudot code is:
- 3
- 4
- 5
- 2

Which process is used to generate an assembly statement from a model statement?
- Symbol Translation
- Lexical Translation
- Lexical substitution
- Symbol generation

An algorithm is made up of two independent time complexities \( f(n) \) and \( g(n) \). Then the complexities of the algorithm is in the order of:
21 of 100
191 PU_2015_370
Which of the following is true?
- The linkage editor resolves external references between the object modules during execution time
- The linkage editor links object modules and resolves external references between them before loading
- The linkage editor links object modules during compiling or assembling
- The linkage editor is used to edit programs which have to be later linked together

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115 PU_2015_370
The maximum data rate that a medium of 10 KHz and signal to noise ratio of 30dB is roughly:–
- 30 Kbps
- 3 Kbps
- 10 Kbps
- 100 Kbps

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211 PU_2015_370
Natural language processing is divided into the two subfields of:
- time and motion
- understanding and generation
- symbolic and numeric
- algorithmic and heuristic

24 of 100
160 PU_2015_370
A grammar for a programming language is a formal description of:
- Structure
- Syntax
- Semantics
- Library

25 of 100
100 PU_2015_370

- f(n) x g(n)
- f(n) + g(n)
- Min (f(n),g(n))
- Max ( f(n),g(n))
If every requirement stated in the Software Requirement Specification (SRS) has only one interpretation, then the SRS is said to be:

- correct
- consistent
- verifiable
- unambiguous

26 of 100
110 PU_2015_370
How many cross points are needed in a single-stage switch with 40 inputs and 50 outputs?

- 2000
- 50
- 40
- 90

27 of 100
127 PU_2015_370
A mathematical-model with a collection of operations defined on that model is called:

- Data Structure
- Primitive Data Type
- Algorithm
- Abstract Data Type

28 of 100
177 PU_2015_370
Virtual Memory is __________.

- Extremely Large Main Memory
- An illusion of Extremely Large Secondary Memory
- Extremely Large Secondary Memory
- An illusion of Extremely Large Main Memory

29 of 100
119 PU_2015_370
Which of the following helps code reuse in the object oriented paradigm?

- aggregation
- inheritance
- class
- object
indicating the names of all functions and global variables and the virtual addresses they correspond to.

- File Table
- Page Table
- Symbol Table
- Based table

31 of 100
Macro definitions are typically located at the start of a program. It consists of all but:-

- A macro prototype statement
- Macro preprocessor
- One or more model statements
- Expansion of Macro

32 of 100
One factor in the accuracy of a reconstructed PCM signal is the:-

- Carrier frequency
- Baud rate
- Number of bits used for quantization
- Signal bandwidth

33 of 100
What is the minimum number of stacks of size n required to implement a queue of size n?

- Four
- Three
- One
- Two

34 of 100
In the Spiral Model the 'Risk Analysis' is performed:-

- in every loop
- in the first loop
- before using spiral model
- in the first and second loop
35 of 100
151 PU_2015_370
Which of these is not true about Symbol Table?
- Table has entry for symbol name address value
- Perform the processing of the assembler directives
- All the labels of the instructions are symbols created during pass 1

36 of 100
201 PU_2015_370
Which of the following is NOT a component on the device controller interface?
- Data register or buffer
- Command register
- Status register
- Framis register

37 of 100
146 PU_2015_370
The following sequence of operation is performed on stack:
- push(1), push(2), pop, push(1), push(2), pop, pop, push(2), pop. The sequence of popped out values are:
- 2, 2, 1, 1, 2
- 2, 1, 2, 2, 2
- 2, 1, 2, 2, 1
- 2, 2, 1, 2, 2

38 of 100
126 PU_2015_370
The searching technique that takes O(1) time to find a data is:
- Linear Search
- Hashing
- Binary Search
- Tree Search

39 of 100
216 PU_2015_370
The device controller interface is manipulated by which of the following components?
- Device driver
- Process manager
- Memory manager
You are working with a network that is 170.12.0.0 and would like to support 612 hosts per subnet. What subnet mask should you use?

- 255.255.252.0
- 255.255.248.0
- 255.255.240.0
- 255.255.255.0

The mode bit can be implemented in:

- Any system software
- Hardware
- Kernel space software
- Middleware

Conceptually, how many entries are there in a page table?

- \( \frac{\text{virtual address space}}{\text{page size}} \)
- virtual address space
- \( \text{# of page frames allocated to the process} \times \text{page size} \)
- \( \frac{\text{# of page frames allocated to the process}}{\text{page size}} \)

The depth of a complete binary tree is given by:

- \( D_n = n \log_2 n \)
- \( D_n = n \log_2 n + 1 \)
- \( D_n = \log_2 n + 1 \)
- \( D_n = \log_2 n \)

_________ is the primary consideration in designing knowledge-based AI systems.

- Analogy
- Acquisition
Output comparators are used in:
- static testing of single module
- dynamic testing of single and multiple module
- dynamic testing of single module
- static testing of single and multiple module

An I/O bound program will typically have:
- A few very short CPU bursts
- Many very short CPU bursts
- A few very short I/O bursts
- Many very short I/O bursts

A variable P is called pointer if:
- P contain the DATA and the address of DATA
- P points to the address of first element in DATA
- P can store only memory addresses
- P contains the address of an element in DATA

In a binary tree, certain null entries are replaced by special pointers which point to nodes higher in the tree for efficiency. These special pointers are called:
- path
- Leaf
- branch
- thread

Test cases consist of 
- requirements specifications
50 of 100
135 PU_2015_370
Which of the following is not an attribute of software engineering?
- Efficiency
- Dependability
- Scalability
- Usability

51 of 100
163 PU_2015_370
In a two pass assembler the object code generation is done during the:
- Zeroth pass
- Not done by assembler
- First pass
- Second pass

52 of 100
120 PU_2015_370
What is the range of Ephemeral ports?
- 1 to 1024
- 1024 to 65535
- 1 to 80
- 80 to 8080

53 of 100
118 PU_2015_370
If you have a class C address, with a three-bit subnet mask, which of the following would be a subnetwork identifier?
- 203.16.34.33
- 203.16.34.135
- 203.16.34.135
- 203.16.34.224

54 of 100
156 PU_2015_370
Storage mapping is done by:-
55 of 100
130 PU_2015_370
What is the postfix form of the following prefix expression -A/B*C$DE
- A-BCDE*/-
- ABCDE$*/-
- ABC$ED*/-
- A-BCDE$*/-

56 of 100
131 PU_2015_370
Requirements can be refined using:
- the spiral model
- The waterfall model
- the evolutionary model
- prototyping model

57 of 100
152 PU_2015_370
Which of these is not an activity done in Pass-2 of multi-pass assembler?
- Assemble the instructions (translating operation codes and looking up addresses).
- Write the object program and assembler listing.
- Perform the processing of the assembler directives not done during pass-1.
- Assign addresses to all the labels.

58 of 100
108 PU_2015_370
Ping sweep is a part of:
- Nmap
- Route
- Traceroute
- Ipconfig

59 of 100
133 PU_2015_370
Which is not a size metric?
Function count
LOC
Program length
Cyclomatic Complexity

60 of 100
207 PU_2015_370
In LISP, the addition 3 + 2 is entered as:-

- 3 + 2
- 3 add 2
- (+ 3 2)
- 3 + 2=

61 of 100
236 PU_2015_370
RIA stands for:-

- Rapid Infrastructure Access
- Rapid Information Application
- Rich Internet Application
- Rich Information Application

62 of 100
245 PU_2015_370
CSS stands for:-

- Cascading Simple Sheets
- Cascading Sample Sheets
- Cascading Separate Sheets
- Cascading Style Sheets

63 of 100
220 PU_2015_370
When a process is created, which of the following actions occur?

- The new process receives a resource allocation from the process that created it.
- The child process clones the parent process identification.
- A process descriptor is allocated for the process.
- The new process loads the program it intends to use.

64 of 100
225 PU_2015_370
Which of the following items is NOT usually a part of a process descriptor?
65 of 100
259 PU_2015_370
The data transfer operation that is done with the help of program and CPU is called:-
- Direct memory access data transfer
- Program controlled data transfer
- Bidirectional data transfer
- Interrupt controlled data transfer

66 of 100
224 PU_2015_370
The process address space is ultimately defined by:-
- Relocatable object modules
- Absolute program
- Link editor
- Load module

67 of 100
234 PU_2015_370
The Linux distribution developed in India is:-
- B-Linux
- I-Linux
- J-Linux
- BOSS

68 of 100
243 PU_2015_370
Using the biological features for authentication and authorization is known as:-
- Bio Sequence
- Bio Soft
- Bio Magic
- Bio Metrics

69 of 100
229 PU_2015_370
RSA is a:-
70 of 100
239 PU_2015_370
GPS stands for:-
- Global Package System
- Global Police System
- Great Profile System
- Global Positioning System

71 of 100
257 PU_2015_370
The most efficient way of multiplying a number by two is by performing:-
- Rotate left operation
- Rotate right operation
- Shift right operation
- Shift left operation

72 of 100
255 PU_2015_370
The program counter is a pointer that contains address of the next instruction to be executed but it is also called:-
- Segment register pointer
- Base pointer
- Instruction pointer
- Stack pointer

73 of 100
235 PU_2015_370
JQuery is a:-
- MySQL framework
- Java Framework
- PHP framework
- Javascript Framework

74 of 100
247 PU_2015_370
Which of the following is used for short distance communication?

- Blue Tooth
- Radio Waves
- Filter waves
- Green Tooth

75 of 100
227 PU_2015_370
Python is a:
- Protocol
- Package manager
- Operating system
- Programming language

76 of 100
252 PU_2015_370
If all of the flip flops are triggered simultaneously by the clock input pulses and all flip flops change at same time is called:
- Ripple counters
- Asynchronous counters
- Synchronous counters
- Shift counters

77 of 100
231 PU_2015_370
HTTPS is used for:
- Separate connections
- Secure connections
- Straight connections
- Slow connections

78 of 100
222 PU_2015_370
To which depth does the alpha-beta pruning can be applied?
- 10 States
- 8 States
- 6 States
- Any depth

79 of 100
221 PU_2015_370
After a newly created process has been made ready for execution, which of the following actions occur?
- It waits for user input
- It voluntarily yields the CPU to other processes
- It competes with other processes for the CPU
- It creates a window for user interaction

80 of 100

241 PU_2015_370
The software which would listen to all the keystrokes made by the user is called:
- K-Manager
- Shortcut Manager
- Key Manager
- Key logger

81 of 100

292 PU_2015_370
To cancel the privilege given to a user _________ is used.
- CANCEL
- REVOKE
- UNPRIVILEGE
- GRANT CANCEL

82 of 100

296 PU_2015_370
Which one of the following is not a Unary operator?
- Select
- Project
- Cartesian Product
- Rename

83 of 100

299 PU_2015_370
Which of the following is the fault based testing technique?
- unit testing
- beta testing
- mutation testing
- Stress testing

84 of 100
An n-bit microprocessor has:
- n-bit program counter
- n-bit instruction register
- n-bit data bus
- n-bit address register

The logical aspects of the implementation (the logical and physical design techniques used to realize the architecture) is called:
- Computer Organization
- Microprocessor
- Computer Architecture
- Internal architecture

The structure and behavior as seen by the programmer working in assembly language level.
- Microprocessor
- Computer Organization
- Computer Architecture
- Internal architecture

The number of tuples or rows in a relation is called the __________ of the relation.
- Instance
- Cardinality
- Set
- Strength

A microprogram sequencer:
- generates the address of next micro instruction to be executed
- sequentially averages all microinstructions in the control memory
- enables the efficient handling of a micro program subroutine
- generates the control signals to execute a microinstruction
89 of 100
274 PU_2015_370
DBMS is __________.
- a File System
- an Operating System
- a Layer on top of the File System
- a Security System

90 of 100
298 PU_2015_370
A Transaction completes its execution is said to be:-
- Interrupted
- Rolled Back
- Committed
- Blocked

91 of 100
282 PU_2015_370
Normalization of relations is used to:-
- Eliminate Redundancy
- Minimize Errors
- Improve Efficiency
- Improve Security

92 of 100
294 PU_2015_370
UML Stands for:-
- Userfriendly Modelling Language
- Uniform Meta Language
- Unified Modelling Language
- Uniform Markup Language

93 of 100
277 PU_2015_370
The wait time for a process is:-
- The amount of time a process needs to be in the running state before it is completed
- The amount of time the process spends waiting in the ready state before its first transition to the running state
- The amount of time between the moment a process first enters the ready state and the moment the process exits the running state for the last time
The time the process waits for all resources to be allocated to it

94 of 100
286 PU_2015_370
Which one of the following is in Transitive Dependency?
- A→B, B→C, C→A
- A→B, B→C, A→C
- A→B, B→C, B→C
- A→B, A→C, B→C

95 of 100
260 PU_2015_370
In which address mode the address of the operand is explicitly specified:
- Direct addressing mode
- Memory addressing
- Indexed mode
- Immediate addressing mode

96 of 100
263 PU_2015_370
The free blocks which are all small and scattered around the memory cannot be allocated to the incoming block even though the total size of those blocks can be larger than the incoming block. The small free blocks can combined to form a large block.
- Compaction
- Relocation
- Thrashing
- Buddy system

97 of 100
266 PU_2015_370
The amount of time required to read a block of data from a disk into memory is composed of seek time, rotational latency, and transfer time. Rotational latency refers to:
- the time it takes for the platter to make a full rotation
- the time taken to transfer the data
- the time it takes for the platter to rotate the correct sector under the head
- the time it takes for the read-write head to move into position over the appropriate track

98 of 100
291 PU_2015_370
_________ indicates whether a buffer has been modified or not.
- Overflow Bit
The SQL DDL statement TRUNCATE is used to:

- All records from a relation
- Remove all tables from the database
- All candidate keys of a relation
- All constraints from a relation

The join operations that allows only matching tuples to be kept in the result are called:

- Outer Join
- Right Outer Join
- Left Outer Join
- Inner Join