

The special memory used to store the micro routines of a computer is _____.	1. Control table 2. <b>Control store</b> 3. Control mart 4. Control shop
How many transistors does the 8086 have	<b>1.29,000</b> 2.10,000 3.129,000 4.110,000
Which of the following is a valid destructor of the class name "Country"	1. <b>void ~Country()</b> 2. int ~Country(Country obj) 3. int ~Country() 4. Country()
Which one of the following is not a step of requirement engineering?	1. Elicitation 2. <b>Design a model</b> 3. Analysis 4. Documentation
What are the minimum number of 2-to-1 multiplexers required to generate a 2- input AND gate and a 2-input ExOR gate?	1. <b>1 and 2</b> 2. 1 and 3

	<p>3.</p> <p>1 and 1</p> <p>4. 2 and 2</p>
Magnitude comparator compares using operation of	<p>1. <b>addition</b></p> <p>2. subtraction</p> <p>3. multiplication</p> <p>4. division</p>
A 2 bit binary multiplier can be implemented using	<p>1. 2 input ANDs only</p> <p>2. <b>2 input X-ORs and 4-input AND gates only</b></p> <p>3. XOR gates and shift registers</p> <p>4. Two (2) input NORs and one XNOR gate</p>
VOLATILE MEMORY IS _____ ?	<p>1. COMPACT DISK 2. HARD DISK <b>3. RANDOM ACCESS MEMORY</b> 4. READ ONLY MEMORY</p>
A J-K flip-flop is in a "no change" condition when _____.	<p>1. J = 1, K = 1 2. J = 1, K = 0 3. J = 0, K = 1 <b>4. J = 0, K = 0</b></p>

<p>If two interrupts, one of higher priority and other of lower priority occur simultaneously, then the service provided is for</p>	<p>1. interrupt of lower priority</p> <p>2. <b>interrupt of higher priority</b></p> <p>3. both the interrupts</p> <p>4. none of the mentioned</p>
<p><b>What is an Accumulator?</b></p>	<p>1. A Flip flop</p> <p>2. A counter</p> <p>3. A Sequential Logic Circuit</p> <p>4. A Combinational Logic Circuit</p>
<p>The correspondence between the main memory blocks and those in the cache is given by</p>	<p>1. Hash function</p> <p>2. <b>Mapping function</b></p> <p>3. Locale function</p> <p>4. Assign function</p>
<p>How many different states does a 3-bit asynchronous counter have?</p>	<p>1.2 2.4 <b>3.8</b> 4.16</p>
<p>Popular application of flip-flop are.</p>	<p>1.Shift registers 2.Transfer register 3.Counters <b>4.All of these</b></p>
<p>What type of register would shift a complete binary number</p>	

in one bit at a time and shift all the stored bits out one bit at a time?	1.PIPO 2.PISO 3.SIPO <b>4.SISO</b>
A certain 5-bit self-complementary code is used to represent the 10 decimal digits 0 through 9. Given that (246) in decimal is represented as 00010 00100 00110 in this code, what is the representation for (375)?	1.00110 00100 00010 2.00011 00111 00101 3.11001 11101 110114.11101 11011 11001
How many flip-flops are required to make a MOD-32 binary counter?	1.3 2.4 <b>3.5</b> 4.6
To operate correctly, starting a ring counter requires	1.presetting all the flip-flops 2.clearing one flip-flop and presetting all the others <b>3.presetting one flip-flop and clearing all the others</b> 4.clearing all the flip-flops
Which one is not a self complementary code?	1.8 4 -2 -1 <b>2.4 8 1 2</b> 3.4 4 3 -2 4.2 4 2 1
An SR flip flop cannot accept the following input entry	1. Both input zero  2. zero at R and one at S  3. zero at S and one at R  <b>4.</b> <b>Both inputs one</b>

The advantage of DBMS over file systems is	<p>1. <b>redundancy</b></p> <p>2. data dependence</p> <p>3. multiple user</p> <p>4. single user</p>
How many stages are there in process improvement?	<p>1. <b>three</b></p> <p>2. four</p> <p>3. five</p> <p>4. six</p>
<p>Given the language <math>L = \{ab, aa, baa\}</math>, which of the following strings are in <math>L^*</math>?</p> <p>1) <b>abaabaaabaa</b></p> <p>2) <b>aaaabaaaa</b></p> <p>3) <b>baaaaabaaaab</b> 4) <b>baaaaabaa</b></p>	<p>1. 1, 2 and 3</p> <p>2. 2, 3 and 4</p> <p>3. <b>1, 2 and 4</b></p> <p>4. 1, 3 and 4</p>
The decimal equivalent of hexadecimal number of 'A580' is	<p>1. 43286 2. <b>42368</b> 3. 43288 4. 48632</p>

Using 10's complement 72532- 3250 is	<p>1. 69282</p> <p>2. 69272</p> <p>3. 69252</p> <p>4. 69232</p>
X=1010100 and Y=1000011 using 1's complement Y-X is	<p>1. -10111</p> <p>2. -10011</p> <p>3. -10001</p> <p>4. -11001</p>
Following can be used to implement a SOP function without changing it into minterms	1.MUX 2.PLA 3.ROM 4.DeMUX
A comparison between ring and Johnson counters indicates that:	<p>1.A ring counter has fewer flip-flops but requires more decoding circuitry 2.A ring counter has an inverted feedback path 3.A Johnson counter has more flip-flops but less decoding circuitry</p> <p>4.A Johnson counter has an inverted feedback path</p>

One application of a digital multiplexer is to facilitate:	1.data generation 2.serial-to-parallel conversion <b>3.data selector</b> 4.parity checking
Flip-flop excitation tables shows that	1.For the given PS and NS what will be the inputs <b>2.For the given PS and NS what will be the outputs</b> 3.For the given PS and NS what will be the type of flip-flops 4.For the given PS and NS what will be the values of NS and PS respectively
How is a J-K flip-flop made to toggle?	1.J = 0, K = 0 2.J = 0, K = 1 3.J = 1, K = 0 <b>4.J = 1, K = 1</b>
The combination of Sixteen adjacent squares in four variable K-map represent the function equal to	1.Four literal 2.One literal <b>3.Unity</b> 4.Zero
K-map follow following code for marking adjacent variables	1.84-2-1 <b>2.Gray Code</b> 3.2421 4.8421
The regular expression $0^*(10^*)^*$ denotes the same set as	<b>1. <math>(1^*0)^*1^*</math></b> 2. $0 + (0 + 10)^*$ 3. $(0 + 1)^* 10(0 + 1)^*$ 4. $(0+1)^*$
The total number of pins for the IC 8255 is	1. 28 <b>2. 40</b> 3. 30 4. 20

The IC 8237 is a	<p>1. <b>DMA Controller</b></p> <p>2. Interrupt Controller</p> <p>3. Keyboard controller</p> <p>4. Serial Interface Controller</p>
IC 8237 has -----many pins	<p>1. <b>40</b></p> <p>2. 28</p> <p>3. 24</p> <p>4. 20</p>
IC 8257 has -----many channels for data transfer	<p>1. 1</p> <p>2. 2</p> <p>3. 3</p> <p>4. <b>4</b></p> <p><b>4</b></p>



The MC 1488 is

1.

TTL to RS 232C Level converter

2.

RS-232 to TTL level converter

3.

Bidirectional Level converter

4.

Unidirectional level converter

The IC Number for USART is -----

1. IC 8251A

2.

IC8259

3.

IC5255

4.

IC 8254

The IC 8251 A has -----many pins

1. 24

2. 28

3. 40

4. 30

What is the software that runs a computer, including scheduling tasks, managing storage, and handling communication with peripherals?	1. driver 2. application suite 3. <b>operating system</b> 4. bluetooth technology
----- is the minimal super key	1. Partial Key 2. <b>Candidate Key</b> 3. Surrogate Key 4. Unique Key
ODBC stands for	1. Object Database Connectivity. 2. Oral Database Connectivity. 3. Oracle Database Connectivity. 4. <b>Open Database Connectivity.</b>
How many bits are required to store one BCD digit?	1.1 2.2 3.3 <b>4.4</b>
STACK is also known as	<b>1.LIFO</b> 2.FILO 3.FIFO 4.LILO

WHICH NUMBER SYSTEM HAS A BASE OF 16	1.DECIMAL 2.OCTAL <b>3.HEXADECIMAL</b> 4.BINARY
WHICH NUMBER SYSTEM HAS A BASE OF 2	<b>1.BINARY</b> 2.OCTAL 3.DECIMAL 4.HEXADECIMAL
which of these sets of logic gates are designated as universal gates	1.XOR , XNOR <b>2.NOR , NAND</b> 3.AND,OR 4.NOT,AND
If a hexadecimal number needs to convert to binary, for each hexadecimal digit there will be how many bits	1.1 2.2 <b>3.4</b> 4.8
1 Kilo bits is equal to	<b>1.1000 bits</b> 2.1024 bits 3.1012 bits 4.1008 bits
in digital system 1 byte is equal to ----- --bits	<b>1.8</b> 2.4 3.2 4.1
In boolean algebra $A+A$ is -----	<b>1.A</b> 2.2A 3.3A 4.4A
Octal number system has a base of	1.2 2.4 <b>3.8</b> 4.16
Multiplexer is a device which has	<b>1.many input and one output</b> 2.one input and many output 3.7 input 3 output 4.3 input and 7 output
Demultiplexer is a device which has	1.3 input 4 output 2.4 input 3 output <b>3.one input and many outputs</b> 4.7 input and 4 output
what is the Boolean expression for 2 input AND Gate	1.A+B <b>2.A.B</b> 3.A-B 4.A/B
What is the Boolean expression for three input OR Gate	<b>1.A+B+C</b> 2.A+B-C 3.A-B-C 4.A.B.C
One's complement of 11001010 is	1.00001111 2.11110000 3.10101010 <b>4.00110101</b>
Convert the binary number (1111000011110000) to hexadecimal number	1.1010 <b>2.F0F0</b> 3.0F0F 4.5050
When will be the output of AND gate is high if there are three inputs A,B and C?	<b>1.A=1, B=1,C=1</b> 2.A=1,B=1,C=0 3.A=0,B=0,C=0 4.A=0,B=1,C=1
In Boolean algebra $A+A'$ is -----	1.A 2.0 3.B <b>4.1</b>
In Boolean algebra $AA'$ is -----	<b>1.0</b> 2.1 3.2 4.3

The decimal number (15) in binary is equal to -----	1.1010 2.0101 <b>3.1111</b> 4.0001
What is the best case for linear search	1.O(n) <b>2.O(1)</b> 3.O(log n) 4.O(2n)
What is the time complexity for insertion sort	1.O(log n) 2.O(n) <b>3.O(n^2)</b> 4.O(1)
How do you check queue is full in array implementation	1. <b>if(rear==size)</b> 2.if(front==size) 3.if(rear==1) 4.if(front==1)
Let G be a graph with n vertices and m edges, What is the tightest upper bound on the running time on Depth First Search of G? Assume that the graph is represented using adjacency matrix	1.O(n) 2.O(m+n) 3.O(mn) <b>4.O(n^2)</b>
In an E-R diagram attributes are represented by	1. rectangle  2.  square  <b>3.</b>  <b>ellipse</b>  4.  triangle
A B-tree of order m has maximum of _____ children	<b>1.</b>  <b>m</b>  2. m + 1  3. m - 1  4.  m/2
A linear collection of data elements where the linear node is given by means of pointer is called	1.primitive list 2.node list <b>3.linked list</b> 4.array

Which amongst the following refers to Absolute addressing mode	<p>1. move R1, R2</p> <p>2. move LOC1, LOC2</p> <p>3. move LOC1, R2</p> <p>4. move LOC2, R1</p>
The mechanism that bring a page into memory only when it is needed is called _____	<p>1. Segmentation</p> <p>2. Fragmentation</p> <p>3. <b>Demand Paging</b></p> <p>4. Page Replacement</p>
Demand paged memory allocation	<p>1. <b>allows the virtual address space to be independent of the physical memory</b></p> <p>2. allows the virtual address space to be a multiple of the physical memory size</p> <p>3. allows deadlock to be detected in paging schemes</p> <p>4. is present only in Windows NT</p>

Assuming today is , 10 July 2000, what is returned by this statement: SELECT to_char>Last_DAY(sysdate), 'DD-MONRR') FROM dual;	<p>1. 17-JUL-00</p> <p>2. 10-JUL-00</p> <p>3. 31-DEC-00</p> <p>4. 31-JUL-00</p>
Which one of the following algorithm is not used in asymmetric-key cryptography?	<p>1. RSA algorithm</p> <p>2.       diffie-hellman algorithm</p> <p>3.       <b>electronic code book algorithm</b></p> <p>4. ECC</p>
In Priority Scheduling a priority number (integer) is associated with each process. The CPU is allocated to the process with the highest priority (smallest integer = highest priority). The problem of, Starvation ? low priority processes may never execute, is resolved by _____.	<p>1. Terminating the process.</p> <p>2. <b>Aging</b></p> <p>3. Mutual Exclusion</p> <p>4. Semaphore</p>

Which of the following language feature is not an access specifier in C++?	<p>1. <b>internal</b></p> <p>2. protected</p> <p>3. public</p> <p>4. private</p>
The 16 bit flag of 8086 microprocessor is responsible to indicate _____	<p>1. <b>the condition of result of ALU operation</b></p> <p>2. the condition of memory</p> <p>3. the result of addition</p> <p>4. the result of subtraction</p>
The microprocessor can read/write 16 bit data from or to _____	<p>1. <b>memory</b></p> <p>2. I/O device</p> <p>3. processor</p> <p>4. register</p>
The intel 8086 microprocessor is a _____ processor	<p>1. 8 bit</p> <p>2. <b>16 bit</b></p> <p>3. 32 bit</p> <p>4. 4bit</p>

Software engineering includes system engineering.	<p>1. True</p> <p>2. <b>False</b></p> <p>3. 4.</p>
In software engineering development, if there are no applicable theories, people often use adhoc approach.	<p>1. <b>True</b></p> <p>2. False</p> <p>3. 4.</p>
Symantec Antivirus is a customized product.	<p>1. True</p> <p>2. <b>False</b></p> <p>3. 4.</p>
Which of the below given sorting techniques has highest best-case runtime complexity?	<p>1.bubble sort 2.insertion sort 3.quick sort</p> <p>4. <b>selection sort</b></p>
Suppose T is a binary tree with 14 nodes. What is the minimum possible depth of T?	<p>1.</p> <p>0</p> <p>2. <b>2</b></p> <p>3. <b>3</b></p> <p>3.</p> <p>4</p> <p>4.</p> <p>5</p>



The term m45 should be made up of at least _____ literals.	1. 6 2. 31 3. 4 4. 5
Abstraction is	1. Having public members 2. having private member and public function 3. friend function 4. friend classes
A collection of unused memory reserved for dynamic allocation is called	1. Heap 2. Static 3. array 4. stack dynamic
The levels of hierarchy in inheritance helps to handle	1. flexibility 2. complexity 3. detailed information 4. security
Run time polymorphism is achieved by _____	1. friend function 2. virtual function 3. operator overloading 4. function overloading
Additive rule	1. cyan+ magenta+ Yellow= white 2. Red + Green + Blue = white 3. cyan+ Green+ Yellow= white 4. cyan+ magenta+ Yellow= Black
What is a Software ?	1. Software is set of programs 2. Software is documentation and configuration of data 3. Software is set of programs and Software is documentation and configuration of data 4. Software is a set of documents.
What is the status of the inputs S0, S1, and S2 of the 74151 eight-line multiplexer in order for the output Y to be a copy of input I5?	1. S0 = 1, S1 = 0, S2 = 1 2. S0 = 1, S1 = 1, S2 = 0 3. S0 = 0, S1 = 1, S2 = 0 4. S0 = 0, S1 = 0, S2 = 1

<p>The negative numbers in the binary system can be represented by</p>	<p>1. 10's Complement</p> <p><b>2. 2's complement</b></p> <p>3.</p> <p>Sign magnitude</p> <p>4.</p> <p>1's complement</p>
<p>The binary value for 0.4375 is</p>	<p>1.</p> <p>0.1111</p> <p>2.</p> <p><b>0.0111</b></p> <p>3.</p> <p>0.0011</p> <p>4. 0.1010</p>
<p>In computers, subtraction is generally carried out by _____.</p>	<p>1.</p> <p>9's complement</p> <p><b>2. 2's complement</b></p> <p>3.</p> <p>10's complement</p> <p>4.</p> <p>1's complement</p>

<p>Floating point representation is used to store ____.</p>	<ol style="list-style-type: none"> <li>1. Boolean values</li> <li>2. <b>real integers</b></li> <li>3. integers</li> <li>4. whole numbers</li> </ol>
<p>Ethernet in metropolitan area network (MAN) can be used as</p>	<ol style="list-style-type: none"> <li>1. pure ethernet</li> <li>2. ethernet over SDH</li> <li>3. ethernet over MPLS</li> <li>4. <b>combination of all of the above mentioned</b></li> </ol>
<p>A point-to-point protocol over ethernet is a network protocol for</p>	<ol style="list-style-type: none"> <li>1. <b>encapsulating PPP frames inside ethernet frames</b></li> <li>2. encapsulating ethernet frames inside PPP frames</li> <li>3. for security of ethernet frames</li> <li>4. for security of PPP frames</li> </ol>

<p>A set of possible data values is called</p>	<ol style="list-style-type: none"> <li>1. attribute</li> <li>2. degree</li> <li>3. <b>domain</b></li> <li>4. tuple</li> </ol>
<p>-24 is 2's complement form is</p>	<ol style="list-style-type: none"> <li>1. <b>11101000</b></li> <li>2. 01111111</li> <li>3. 01001000</li> <li>4. 00111111</li> </ol>
<p>Zero address instruction format is used for</p>	<ol style="list-style-type: none"> <li>1. Von-Neuman architecture</li> <li>2. RISC architecture</li> <li>3. CISC architecture</li> </ol>

	<b>4. Stack-organized architecture</b>
Which of the following is correct for a gated <i>D</i> flip-flop?	<ol style="list-style-type: none"> <li>1. The output toggles if one of the inputs is held HIGH.</li> <li>2. Only one of the inputs can be HIGH at a time.</li> <li>3. The output complement follows the input when enabled.</li> <li>4. <b><i>Q</i> output follows the input <i>D</i> when the enable is HIGH.</b></li> </ol>
Which of the following is/are main parameters that you should use when computing the costs of a software development project?	<ol style="list-style-type: none"> <li>1. Hardware and software costs</li> <li>2. Effort costs (the costs of paying software engineers and managers)</li> <li>3. Travel and training costs</li> <li>4. <b>All the parameters required given in the option.</b></li> </ol>

ASCII, EBCDIC, and Unicode are examples of -----	1. integrated circuits 2. <b>binary coding schemes</b> 3. two-state systems 4. adapter cards
For which of the following flip-flop the output clearly defined for all combinations of two inputs?	1. D type flip-flop  2. R S type flip-flop  3. <b>J K flip-flop</b> 4. T flip-flop
What is an ALU?	1. A Combinational Logic Circuit 2. A Sequential Logic Circuit 3. <b>A Combination of Combinational Circuit and Sequential Circuit</b> 4. A flip flop
LOCK prefix is used most often	1.during normal execution. 2.during DMA accesses 3. <b>during interrupt servicing.</b> 4.during memory accesses
Duality principle is used when SE is	1.square 2. <b>symmetric</b> 3.asymmetricd 4.translated

Decimal number 9 in Gray code is	<p>1. 1111</p> <p>2. <b>1101</b></p> <p>3. 1100</p> <p>4. 1110</p>
Virtual memory is _____	<p>1. A type of memory used in super computers</p> <p>2. <b>An illusion of extremely large main memory</b></p> <p>3. An extremely large main memory</p> <p>4. An extremely large secondary memory</p>
How many possible outputs would a decoder have with a 6bit binary input?	<p>1. 16</p> <p>2. <b>64</b></p> <p>3. 128</p> <p>4. 32</p>
What is the condition for setting the Overflow flag in status register?	<p>1. Last two sum bits are different</p> <p>2. Last two carries are same</p> <p>3. <b>Last two sum bits are same</b></p> <p>4. Last two carries are different</p>

<p>When an instruction is read from the memory, it is called</p>	<ol style="list-style-type: none"> <li>1. Memory Read cycle</li> <li>2. <b>Fetch cycle</b></li> <li>3. Instruction cycle</li> <li>4. Memory write cycle</li> </ol>
<p>If a register containing binary data (11001100) is subjected to arithmetic shift left operation, then the content of the register after 'ashl' shall be</p>	<ol style="list-style-type: none"> <li>1. <b>(10011000)</b></li> <li>2. (11001100)</li> <li>3. (1101100)</li> <li>4. (10011001)</li> </ol>
<p>A Stack-organised Computer uses instruction of</p>	<ol style="list-style-type: none"> <li>1. <b>Zero addressing</b></li> <li>2. Two-addressing</li> </ol>



	<p>3.</p> <p>Indirect addressing</p> <p>4. Index addressing</p>
Content of the program counter is added to the address part of the instruction in order to obtain the effective address is called.	<p>1.</p> <p>index addressing mode.</p> <p>2.</p> <p>register mode.</p> <p>3. implied mode.</p> <p>4.</p> <p><b>relative address mode.</b></p>
A _____ registrar stores the intermediate arithmetic and logic results in it.	<p>1.</p> <p>Address registrar</p> <p>2. Program counter</p> <p>3.</p> <p>Index registrar</p> <p>4.</p> <p><b>Accumulator</b></p>

<p>The processor 80386/80486 and the Pentium processor uses _____ bits address bus:</p>	<p>1. 36</p> <p>2. <b>32</b></p> <p>3. 16</p> <p>4. 64</p>
<p>The number of full and half-adders required to add 16-bit numbers is</p>	<p>1. 8 half-adders, 8 full-adders</p> <p>2. <b>1 half-adders, 15 full-adders</b></p> <p>3. 16 half-adders, 0 full-adders</p> <p>4. 4 half-adders, 12 full-adders</p>

Two automata are equal when	<ol style="list-style-type: none"> <li>1. both are under union</li> <li>2. both are under same language</li> <li>3. both are having equal number of states</li> <li>4. both are having same number of final states</li> </ol>
_____ is commonly used in wireless LAN.	<ol style="list-style-type: none"> <li>1. time division multiplexing</li> <li>2. orthogonal frequency division multiplexing</li> <li>3. space division multiplexing</li> <li>4. long division multiplexing</li> </ol>
What is Wired Equivalent Privacy(WEP)?	<ol style="list-style-type: none"> <li>1. security algorithm for ethernet</li> <li>2. security algorithm for wireless networks</li> <li>3. security algorithm for USB</li> <li>4. None</li> </ol>

<p>WiMAX stands for</p>	<ol style="list-style-type: none"> <li>1. wireless maximum communication</li> <li>2. <b>worldwide interoperability for microwave access</b></li> <li>3. worldwide international standard for microwave access</li> <li>4. none of the mentioned</li> </ol>
<p>Which one of the following modulation scheme is supported by WiMAX?</p>	<ol style="list-style-type: none"> <li>1. binary phase shift keying modulation</li> <li>2. quadrature phase shift keying modulation</li> <li>3. quadrature amplitude modulation</li> <li>4. <b>all of the mentioned</b></li> </ol>
<p>WiMAX MAC layer provides an interface between</p>	<ol style="list-style-type: none"> <li>1. <b>higher transport layers and physical layer</b></li> <li>2. application layer and network layer</li> <li>3. data link layer and network layer</li> <li>4. none of the mentioned</li> </ol>

<p>In cryptography, the order of the letters in a message is rearranged by</p>	<ol style="list-style-type: none"> <li>1. <b>transpositional ciphers</b></li> <li>2. substitution ciphers</li> <li>3. both (a) and (b)</li> <li>4. none of the mentioned</li> </ol>
<p>Cryptanalysis is used</p>	<ol style="list-style-type: none"> <li>1. <b>to find some insecurity in a cryptographic scheme</b></li> <li>2. to increase the speed</li> <li>3. to encrypt the data</li> <li>4. none of the mentioned</li> </ol>
<p>Which one of the following is a cryptographic protocol used to secure HTTP connection?</p>	<ol style="list-style-type: none"> <li>1. stream control transmission protocol (SCTP)</li> <li>2. <b>transport layer security (TLS)</b></li> <li>3. explicit congestion notification (ECN)</li> <li>4. resource reservation protocol</li> </ol>

<p>Voice privacy in GSM cellular telephone protocol is provided by</p>	<p>1. <b>A5/2 cipher</b></p> <p>2. b5/4 cipher</p> <p>3. b5/6 cipher</p> <p>4. b5/8 cipher</p>
<p>Cryptographic hash function takes an arbitrary block of data and returns</p>	<p>1. <b>fixed size bit string</b></p> <p>2. variable size bit string</p> <p>3. both (a) and (b)</p> <p>4. None</p>
<p>IPSec is designed to provide the security at the</p>	<p>1. transport layer</p> <p>2. <b>network layer</b></p> <p>3. application layer</p> <p>4. session layer</p>

In tunnel mode IPsec protects the	<p>1. <b>entire IP packet</b></p> <p>2.</p> <p>IP header</p> <p>3.</p> <p>IP payload</p> <p>4.</p> <p>none of the mentioned</p>
Network layer firewall works as a	<p>1.</p> <p>frame filter</p> <p><b>2.</b></p> <p><b>packet filter</b></p> <p>3. both (a) and (b)</p> <p>4.</p> <p>none of the mentioned</p>
Which one of the following event is not possible in wireless LAN.	<p><b>1. collision detection</b></p> <p>2.</p> <p>Acknowledgement of data frames</p> <p>3.</p> <p>multi-mode data transmission</p> <p>4.</p> <p>none of the mentioned</p>

Data Members of the base class that are marked private:	<ol style="list-style-type: none"> <li>1. are directly accessible in the derived class</li> <li>2. are visible in the derived class</li> <li>3. exist in memory when the object of the derived class is created the derived class</li> <li>4. does exist in memory when the object of the derived class is created</li> </ol>
What is true about constant member function of a class?	<ol style="list-style-type: none"> <li>1. cannot access any of its class data members</li> <li>2. cannot modify values of its class data members</li> <li>3. cannot modify values of its class data members which are mutable</li> <li>4. can modify values of its class data members</li> </ol>
The call to the parameterized constructor of base class in the derived class	<ol style="list-style-type: none"> <li>1. appears inside the definition of the derived class</li> <li>2. ppears inside the definition of the derived class constructor</li> <li>3. appears at the statement where the derived class object is created</li> <li>4. appears in the member initialization list of the derived class constructor</li> </ol>
What is the return type of the conversion operator function?	<ol style="list-style-type: none"> <li>1. no return type</li> <li>2. int</li> <li>3. void</li> <li>4. float</li> </ol>
All member functions are _____ to it's class by default	<ol style="list-style-type: none"> <li>1. constant</li> <li>2. non static</li> <li>3. dynamic</li> <li>4. static</li> </ol>



In C++, dynamic memory allocation is accomplished with the operator ____	1. <b>new</b> 2. this 3. malloc 4. delete
The members of a class in c++ by default, are	1. <b>private</b> 2. protected 3. public 4. mandatory to specify
Which of the following is not a type of constructor?	1. Copy Constructor 2. <b>Friend Constructor</b> 3. Default Constructor 4. Parametrized Constructor
If X is the name of the class, what is the correct way to declare copy constructor of X?	1. X(class X* arg) 2. <b>X(X&amp; arg)</b> 3. X(X* arg) 4. X(X arg)
What does the following declaration mean? int (*ptr)[10];	1. ptr is array of pointers to 10 integers 2. <b>ptr is a pointer to an array of 10 integers</b> 3. ptr is an array of 10 integers 4. ptr is an pointer to array
How will you free the allocated memory ?	1. remove(var-name); 2. <b>free(var-name);</b> 3. delete(var-name); 4. dalloc(var-name);
What do the 'c' and 'v' in argv stands for?	1. <b>'c' means argument count 'v' means argument vector</b> 2. 'c' means argument count 'v' means argument vertex 3. 'c' means argument configuration 'v' means argument visibility 4. 'c' means argument control 'v' means argument vector
ALGORITHM HAS THE _____ TO THE PROBLEM IN _____ NUMBER OF STEPS	1. <b>SOLUTION &amp; FINITE</b> 2. PROBLEM & INFINITE 3. SOLUTION & INFINITE 4. <b>PROBLEM &amp; FINITE</b>

THE DATA TYPE IS ALL ABOUT	1.NAME VALUE ADDRESS 2.BITS BYTES WORD 3.SIZE LIMITS RESTRICTIONS 4. <b>TYPE SIZE RANGE</b>
Multiple variable declaration of same data type can be avoided by?	1. <b>array</b> 2.identifiers 3.functions 4.Pointer
String length is found by the condition	1.str[i]!=NULL 2.str[i]!=sizeof(str) 3.str[i]>='\0' 4. <b>str[i]!='\0'</b>
Specify the 2 library functions to dynamically allocate memory?	1.alloc() and memalloc() 2. <b>malloc() and calloc()</b> 3.memalloc() and faralloc() 4.malloc() and memalloc()
What keyword covers unhandled possibilities?	1.other 2. <b>default</b> 3.contingency 4.all
WHICH OF THE BELOW IS CALLED CLASSLESS ADDRESS?	1. 191.168.1.1/24  2. <b>191.168.1.1/16</b>  3. 191.168.1.1/8  4. 191.168.1.1/4

WE RECEIVED "404 – PAGE NOT FOUND" MESSAGE, WHEN WE BROWSE THE WEB PAGE. WHICH PROTOCOL PROVIDES THIS MESSAGE?	1. IGP  2. EGP  3. SNMP  4. ICMP
class n{ int a=0;}obj; what will happen?	1. nothing  2. initializes the data member with 0  3. error  4. <b>initializes the object with 0</b>
Identify the invalid statement from the following	1. for ( ; ; )  2. if (1)  3. <b>break(0)</b>  4. while(false)
A variable P is called pointer if	1. <b>P contains the address of an element in DATA</b> 2 .P contain the DATA and the address of DATA 3.P can store only memory addresses 4.P points to the address of first element in DATA
SELECT THE HIGHEST PRIORITY OPERATOR	1.&& 2., 3.?: <b>4.++</b>
Which of the following function sets first n characters of a string to a given character?	1.strset() <b>2.strnset()</b> 3.strninit() 4.strcset()
The library function used to find the last occurrence of a character in a string is	1.strnstr() 2.laststr() <b>3.strrchr()</b> 4.strstr()
Which one of the following is a requirement that fits in a developer's module ?	1. Availability

	<p>2.</p> <p><b>Testability</b></p> <p>3.</p> <p>Usability</p> <p>4.</p> <p>Flexibility</p>
<p>Consider the following function</p> <pre>double f(double x) { if (abs(x*x - 3) &lt; 0.01) return x; else return f(x/2 + 1.5/x); }</pre> <p>Give a value q (to 2 decimals) such that f(q) will return q:_____.</p>	<p>1.1.723 <b>2.1.732</b> 3.0.732 4.1.733</p>
<p>Which header file should be included to use functions like malloc() and calloc()?</p>	<p>1.string.h 2.dos.h 3.memory.h 4.<b>stdlib.h</b></p>
<p>Consider the following C declaration</p> <pre>struct { short s [5] union { float y; long z; }; } u; } t;</pre> <p>Assume that objects of the type short, float and long occupy 2 bytes, 4 bytes and 8 bytes, respectively. The memory requirement for variable t, ignoring alignment considerations, is</p>	<p>1.10 bytes <b>2.18 bytes</b> 3.22 bytes 4.14 bytes</p>
<p>If a class C is derived from class B, which is derived from class A, all through public inheritance, then a class C member function can access</p>	<p>1.protected and public data only in C and B  2.protected and public data only in C.  3.private data in A and B. <b>4.protected data in A and B.</b></p>
<p>class n{ int a;}; how much memory the compiler allocates for this class</p>	<p>1.0 2.2 3.depends on compiler <b>4.4</b></p>

The two statements that can be used to change the flow of control are	1.switch and do-while 2.if and while <b>3.if and switch</b> 4.break and continue
If p and q are assigned the values 2 and 3 respectively then the statement P = q++	1.assigned a value 5 to p <b>2.assigned a value 3 to p</b> 3.gives an error message 4.assigned a value 4 to p
Creating additional function similar to template function is called	1.implicit specialization 2.explicit specialization 3.abstraction <b>4.template overriding</b>
A parameterized constructor with all arguments initialized is same as	1. <b>default constructor</b> 2.parameterized constructor 3.overriding 4.overloading
Compile time polymorphism is	1. <b>function overloading</b> 2.template 3.function overriding 4.abstraction
Which of the following correctly describes C++ language?	1.Statically typed language 2.Dynamically typed language 3.Both Statically and dynamically typed language <b>4.Type-less language</b>
Routine is not loaded until it is called. All routines are kept on disk in a relocatable load format. The main program is loaded into memory & is executed. This type of loading is called _____	1.Static loading 2.Dynamic loading 3. <b>Dynamic linking</b> 4.Overlays
A static data member is given a value	1.Within the class definition <b>2.Outside the class definition</b> 3.When the program is executed 4.Never
which of the following is an incorrect definition inside a class ?	1.void * operator new(size_t size) { } 2.void * operator new () { } 3.void operator delete(void * ptr) { } <b>4.int operator ++() { }</b>
The stream insertion operator should be overloaded as	1.friend functions 2.member function 3.non member functions <b>4.static functions</b>
Data Members of the base class that are marked private:	<b>1.does exist in memory when the object of the derived class is created</b> 2.exist in memory when the object of the derived class is created the derived class 3.are visible in the derived class 4.are directly accessible in the derived class

The call to the parameterized constructor of base class in the derived class	<p>1. <b>.ppears inside the definition of the derived class constructor</b></p> <p>2. appears in the member initialization list of the derived class constructor</p> <p>3. appears inside the definition of the derived class</p> <p>4. appears at the statement where the derived class object is created</p>
Which of the following statements is NOT valid about operator overloading?	<p>1. Overloaded operator must have at least one operand of its class type.</p> <p>2. Only existing operators can be overloaded.</p> <p>3. The overloaded operators follow the syntax rules of the original operator.</p> <p>4. <b>The arity of the operator can be changed</b></p>
Which of the following statements are true in c++?	<p>1. Class members are public by default.</p> <p>2. Structures can not have functions as members.</p> <p>3. Classes can not have data as public members.</p> <p>4. <b>Structures can have functions</b></p>
Which of these is incorrect ?	<p>1.</p> <p>Software engineering belongs to Computer science</p> <p>2.</p> <p>Software engineering is a part of more general form of System Engineering</p> <p>3.</p> <p><b>Computer science belongs to Software engineering</b></p> <p>4.</p> <p>Software engineering is concerned with the practicalities of developing and delivering useful software</p>

<p>The Incremental Model is a result of combination of elements of which two models?</p>	<ol style="list-style-type: none"> <li>1. Build &amp; FIX Model &amp; Waterfall Model</li> <li>2. Linear Model &amp; RAD Model</li> <li>3. <b>Linear Model &amp; Prototyping Model</b></li> <li>4. Waterfall Model &amp; RAD Model</li> </ol>
<p>Which one of the following models is not suitable for accommodating any change?</p>	<ol style="list-style-type: none"> <li>1. Build &amp; Fix Model</li> <li>2. Prototyping Model</li> <li>3. RAD model</li> <li>4. <b>Waterfall Model</b></li> </ol>
<p>Which model can be selected if user is involved in all the phases of SDLC?</p>	<ol style="list-style-type: none"> <li>1. Waterfall Model</li> <li>2. Prototyping Model</li> <li>3. <b>RAD Model</b></li> <li>4. Prototyping Model and RAD model</li> </ol>

Which is one of the most important stakeholder from the following ?	1. Entry level personnel 2. Middle level stakeholder 3. Managers 4. <b>Users of the software</b>
Which of these does not belong to the basic principles of good product design ?	1. Adequacy 2. Feasibility <b>3. Portability</b> 4. Economy
The project planner examines the statement of scope and extracts all important software functions which is known as	1. Association <b>2. Decomposition</b> 3. Planning process 4. ALL
66.6% risk is considered as	1. very low 2. low 3. moderate 4. <b>high</b>



<p>Risk management is one of the most important jobs for a</p>	<ol style="list-style-type: none"> <li>1. Client</li> <li>2. Investor</li> <li>3. Production team</li> </ol>
	<ol style="list-style-type: none"> <li>4. <b>Project manager</b></li> </ol>
<p>Which of the following term is best defined by the statement: "The underlying technology on which the system is built is superseded by new technology."?</p>	<ol style="list-style-type: none"> <li>1. <b>Technology change</b></li> <li>2. Product competition</li> <li>3. Requirements change</li> <li>4. None</li> </ol>
<p>What assess the risk and your plans for risk mitigation and revise these when you learn more about the risk?</p>	<ol style="list-style-type: none"> <li>1. <b>Risk monitoring</b></li> <li>2. Risk planning</li> <li>3. Risk analysis</li> <li>4. Risk identification</li> </ol>

Which of the following risks are derived from the organizational environment where the software is being developed?	1. People risks 2. Technology risks 3. Estimation risks 4. <b>Organizational risks</b>
Which of the following risks are derived from the software or hardware technologies that are used to develop the system?	1. Managerial risks 2. <b>Technology risks</b> 3. Estimation risks 4. Organizational risks
Which of the following term is best defined by the statement: "Derive traceability information to maximize information hiding in the design."?	1. Underestimated development time 2. Organizational restructuring 3. <b>Requirements changes</b> 4. None

What is the maximum number of reduce moves that can be taken by a bottom-up parser for a	1. $n/2$ 2. <b><math>n-1</math></b> 3. $2n-1$ 4. $2^n$
Which one of the following is a top-down parser?	1. An LR(k) parser. 2. An LALR(k) parser 3. Operator precedence parser. 4. <b>Recursive descent parser.</b>
Which of the following derivations does a top-down parser use while parsing an input string? The input is assumed to be scanned in left to right order.	1. <b>Leftmost derivation</b> 2. Leftmost derivation traced out in reverse 3. Rightmost derivation 4. Rightmost derivation traced out in reverse
An LALR(1) parser for a grammar G can have shift-reduce (SR) conflicts if and only if	1. <b>The LR(1) parser for G has S-R conflicts.</b> 2. The LR(0) parser for G has S-R conflicts. 3. The LALR(1) parser for G has reduce-reduce conflicts 4. The SLR(1) parser for G has S-R conflicts.
Multiplication of a positive integer by a power of two can be replaced by left shift, which executes faster on most machines. This is an example of	1. Useless Code 2. <b>Strength Reduction</b> 3. Induction Variable 4. Loop unwinding
When we concatenate two languages L1 and L2 recognized by machine M1 and M2 we obtain a machine with final state same as that of _____	1. M1 OR M2 2. <b>M1 AND M2</b> 3. M2 4. M1

<p>The number of states in a machine M recognizing <math>L_1 \cup L_2</math> will be _____ where n is the number of states in M1 and m is the number of states in M2 .</p>	<p>1. <math>m-n</math></p> <p>2. <b><math>m+n</math></b></p> <p>3. <math>m+n+1</math></p> <p>4. <math>n-m</math></p>
<p>If there is a complete DFA M1 recognizing a language L1 and has m states out of which two are final states then the machine M recognizing L1 complement will have _____ final states.</p>	<p>1. <b><math>m+2</math></b></p> <p>2. <math>m</math></p>
	<p>3. <math>m-2</math></p> <p>4. 2</p>

<p>If M1 machine recognizing L with n states, then M2 recognizing L* constructed Using Thompson construction will have ----- states.</p>	<p>1. n+2</p> <p>2. <b>n+1</b></p> <p>3. n</p> <p>4. n-1</p>
<p>which of the following intermediate language can be used in intermediate code generation?</p>	<p>1. Quadraples</p> <p>2. <b>Postfix notation and Three address code</b></p> <p>3. Triples</p> <p>4. Infix notation and two address code</p>
<p>A finite automata that will accept only string X of length n will have _____ many states</p>	<p>1. n</p> <p>2. n/2</p> <p>3. <b>n+1</b></p> <p>4. infinite</p>
<p><b><i>If a language is denoted by a regular expression</i></b>  <b><i><math>L = (x)^*(x   yx)</math>, then which of the following is not a legal string within L ?</i></b></p>	<p>1. yx</p> <p>2. xyx</p> <p>3.</p>
	<p>x 4.</p> <p><b>xyxyx</b></p>

Number of final state require to accept $\Phi(\phi)$ in minimal finite automata.	1. 4 2. 3 3. 1 4. 0
-----is used to check whether the language is not regular.	1. Pumping Lemma 2. RE 3. MN Theorem 4. Pigeon hole principle
Which of the following statements is/are FALSE? (1) For every non-deterministic Turing machine, there exists an equivalent deterministic Turing machine. (2) Turing recognizable languages are closed under union and complementation. (3) Turing decidable languages are closed under intersection and complementation (4) Turing recognizable languages are closed under union and intersection.	1. 1 and 4 only 2. 1 and 3 only 3. 2 only 4.

	3 only
Which of the following statement is true?	<p>1.NFA is more powerful than DFA</p> <p>2.DFA is more powerful than NFA</p> <p>3.</p> <p>NFA and DFA have equal power</p> <p>4.None</p>
<p>A language is represented by a regular expression</p> <p><math>(a)^*(a+ba)</math>. Which of the following string does not belong to the regular set represented by the above expression.</p>	<p>1.</p> <p>aaa</p> <p>2.</p> <p>aba</p> <p>3.</p> <p>ababa</p> <p>4. aa</p>
The lexical analysis for a modern language such as Java needs the power of which one of the following machine models in a necessary and sufficient sense?	<p>1.</p> <p>Deterministic pushdown automata</p> <p>2.</p> <p>Finite state automata</p> <p>3.</p> <p>Non-deterministic pushdown automata</p> <p>4.</p> <p>Turing machine</p>
A minimum state DFA accepting the language $L=\{w/w \text{ belongs } \{0,1\}^*\}$ number of 0s and 1s in w are divisible by 3 and 5, respectively} has	<p>1.</p> <p>15 states</p> <p>2.</p> <p>7 states</p>

	<p>3. 9 states 4.</p> <p>8 states</p>
<p>Which of the following regular expression denotes a language comprising of all possible strings over <math>\Sigma = \{a,b\}</math> of length <math>n</math> where <math>n</math> is a multiple of 3?</p>	<p>1.</p> <p><math>(a+b+aa+bb+aba+bba)^*</math></p> <p>2.</p> <p><math>(aaa+bbb)^*</math></p> <p>3.</p> <p><math>((a+b)(a+b)(a+b))^*</math></p> <p>4.</p> <p><math>(aaa+ab+a)+(bbb+bb+a)</math></p>
<p>What is the minimum number of states needed to a DFA over <math>\Sigma = (a, b)</math> which accept those words from <math>\Sigma</math> such that the number of <math>a</math> is even and the number of <math>b</math> is divisible by three.</p>	<p>1. 2 states 2. 4 states 3. 6 states</p> <p>4.</p> <p>5 states</p>



Which of the following strategies means that the impact of the risk will be reduced?	1. Avoidance strategies 2. <b>Minimization strategies</b> 3. Contingency plans 4. ALL
Which of the following term is best defined by the statement: "There will be a change of organizational management with different priorities."?	1. Staff turnover 2. Technology change 3. <b>Management change</b> 4. Product competition
Which of the following are decidable?  I. Whether the intersection of two regular languages is infinite  II. Whether a given context-free language is regular  III. Whether two push-down automata accept the same language  IV. Whether a given grammar is context-free	1. I and II 2. I and IV 3. <b>II and III</b> 4. I and III

Which of the following problems is undecidable?	<p>1. Membership problem for CFGs</p> <p>2. <b>Ambiguity problem for CFGs.</b></p> <p>3. Finiteness problem for FSAs</p> <p>4. Equivalence problem for FSAs.</p>
Which of the following problems is undecidable?	<p>1. <b>Deciding if a given context-free grammar is ambiguous.</b></p> <p>2. Deciding if a given string is generated by a given context-free grammar</p> <p>3. Deciding if the language generated by a given context-free grammar is empty</p> <p>4. Deciding if the language generated by a given context-free grammar is finite.</p>
S $\rightarrow$ aSa   bSb   a   b; The language generated by the above grammar over the alphabet {a,b} is the set of	<p>1. All palindromes</p> <p>2. <b>All odd length palindromes.</b></p> <p>3. Strings that begin and end with the same symbol</p> <p>4. All even length palindromes</p>

Which directory implementation is used in most Operating System?	1. Two level directory structure 2. Acyclic directory structure 3. Single level directory structure 4. <b>Tree directory structure</b>
Which one of the following languages over the alphabet $\{0,1\}$ is described by the regular expression: $(0+1)^*0(0+1)^*0(0+1)^*$ ?	1. The set of all strings containing the substring 00. 2. The set of all strings containing at most two 0's. 3. <b>The set of all strings containing at least two 0's.</b> 4. The set of all strings that begin and end with either 0 or 1.
Which of the following scheduling algorithm comes under preemptive scheduling?	1. FCFS 2. <b>Round Robin</b> 3. Multilevel Queue Scheduling 4. Largest Job First
External Fragmentation of the file system	1. can be avoided by paging 2. occurs only if the file system is used improperly 3. <b>can be removed by compaction</b> 4. can be avoided by Segmentation

For purposes of behavior modeling a state is any	<ol style="list-style-type: none"> <li>1. consumer or producer of data.</li> <li>2. data object hierarchy.</li> <li>3. <b>observable mode of behavior.</b></li> <li>4. well defined process.</li> </ol>
Which of the following is a dynamic model that shows how the system interacts with its environment as it is used?	<ol style="list-style-type: none"> <li>1. system context model</li> <li>2. <b>interaction model</b></li> <li>3. environmental model</li> <li>4. both system context and interaction</li> </ol>
Which of the following is golden rule for interface design?	<ol style="list-style-type: none"> <li>1. Place the user in control</li> </ol>
	<ol style="list-style-type: none"> <li>2. Reduce the user's memory load</li> <li>3. Make the interface consistent</li> <li>4. <b>ALL</b></li> </ol>

<p>In a compiler, keywords of a language are recognized during</p>	<p>1. parsing of the program</p> <p>2.</p> <p>the code generation</p> <p>3. <b>the lexical analysis of the program</b></p> <p>4.</p> <p>dataflow analysis</p>										
<p>Match all items in Group 1 with correct options from those given in Group 2.</p> <table border="0"> <thead> <tr> <th>Group 1</th><th>Group 2</th></tr> </thead> <tbody> <tr> <td>P. Regular expression</td><td>1. Syntax analysis</td></tr> <tr> <td>Q. Pushdown automata generation</td><td>2. Code</td></tr> <tr> <td>R. Dataflow analysis</td><td>3. Lexical analysis</td></tr> <tr> <td>S. Register allocation optimization</td><td>4. Code</td></tr> </tbody> </table>	Group 1	Group 2	P. Regular expression	1. Syntax analysis	Q. Pushdown automata generation	2. Code	R. Dataflow analysis	3. Lexical analysis	S. Register allocation optimization	4. Code	<p>1. P-4. Q</p> <p>2. -1, R-2, S-3</p> <p>3. <b>P-3, Q-1, R-4, S-2</b></p> <p>4. P-3, Q-4, R-1, S-2</p> <p>P-2, Q-1, R-4, S-3</p>
Group 1	Group 2										
P. Regular expression	1. Syntax analysis										
Q. Pushdown automata generation	2. Code										
R. Dataflow analysis	3. Lexical analysis										
S. Register allocation optimization	4. Code										
<p>Consider the following code segment.</p> <pre> x = u - t ; y = </pre>	<p>1.</p> <p>6</p> <p>2.</p> <p>8</p> <p>3.</p> <p>9</p> <p><b>4. 10</b></p>										

x

\*

v

;

x

=

y

+

w

;

x

=

t

-

z

;

y

=

x

<p>* y ; The minimum number of total variables required to convert the above code segment to static single assignment form is</p>	
<p>Consider the intermediate code given below:</p> <ol style="list-style-type: none"> <li>1. i = 1</li> <li>2. j = 1</li> <li>3. t1 = 5 * i</li> <li>4. t2 = t1 + j</li> <li>5. t3 = 4 * t2</li> <li>6. t4 = t3</li> <li>7. a[t4] = -1</li> <li>8. j = j + 1</li> <li>9. if j &lt;= 5 goto(3)</li> <li>10. i = i + 1</li> <li>11. if i &lt; 5 goto(2)</li> </ol> <p>The number of nodes and edges in the control-flow-graph constructed for the above code, respectively, are</p>	<ol style="list-style-type: none"> <li>1. 5 and 7</li> <li>2. 6 and 7</li> <li>3. 5 and 2</li> <li>4. 4 and 7</li> <li>5. 7 and 8</li> </ol>
<p>Which of the following is the worst type of module coupling?</p>	<ol style="list-style-type: none"> <li>1. Control Coupling</li> <li>2. Stamp Coupling</li> <li>3. External Coupling</li> <li>4. Content Coupling</li> </ol>

<p>Which of the following is the best type of module cohesion?</p>	<p>1. Functional Cohesion</p> <p>2. Temporal Cohesion</p> <p>3. <b>Functional Cohesion</b></p> <p>4. Sequential Cohesion</p>
<p>Some code optimizations are carried out on the intermediate code because</p>	<p>1. <b>they enhance the portability of the compiler to other target processors</b></p> <p>2. program analysis is more accurate on intermediate code than on machine code</p> <p>3. the information from dataflow analysis cannot otherwise be used for optimization</p> <p>4. the information from the front end cannot otherwise be used for optimization</p>



Which one of the following is FALSE?	<p>1.</p> <p>A basic block is a sequence of instructions where control enters the sequence at the beginning and exits at the end.</p> <p>2.</p> <p><b>Available expression analysis can be used for common subexpression elimination.</b></p> <p>3.</p> <p>Live variable analysis can be used for dead code elimination.</p> <p>4.</p> <p><math>x = 4 * 5 \Rightarrow x = 20</math> is an example of common subexpression elimination.</p>
One of the purposes of using intermediate code in compilers is to	<p>1.</p> <p>make parsing and semantic analysis simpler</p>
	<p>2. improve error recovery and error reporting</p> <p>3.</p> <p><b>increase the chances of reusing the machine-independent code optimizer in other compilers.</b></p> <p>4. improve the register allocation.</p>
A ring counter is same as.	<p>1.up-down counter 2.parallel adder <b>3.shift register</b> 4.ALU</p>
A shift register can be used for.	<p>1.Digital delay line 2.Serial to parallel conversion <b>3.All of these</b>4.Parallel to serial conversion</p>
A synchronous sequential circuit is made up of.	<p>1.combinational gates 2.flip-flops 3.both flip-flops and latches</p> <p>4.<b>both combinational gates and flip-flops</b></p>

Count function in SQL returns the number of	1. <b>values</b> 2. distinct values 3. groups 4. columns
In what type of coupling, the complete data structure is passed from one module to another?	1. Control Coupling 2. <b>Stamp Coupling</b> 3. External Coupling 4. Content Coupling
If all tasks must be executed in the same time-span, what type of cohesion is being exhibited?	1. Functional Cohesion 2. <b>Temporal Cohesion</b> 3. Functional Cohesion 4. Sequential Cohesion

Which of the following pattern is the basis of interaction management in many web-based systems?	<ol style="list-style-type: none"><li>1. architecture</li><li>2. repository pattern</li><li>3. <b>model-view-controller</b></li><li>4. different operating system</li></ol>
Data Store Symbol in DFD represents a	<ol style="list-style-type: none"><li>1. Physical file</li><li>2. <b>Data Structure</b></li><li>3. Logical file</li><li>4. ALL</li></ol>
How many diagrams are here in Unified Modelling Language?	<ol style="list-style-type: none"><li>1. six</li><li>2. seven</li><li>3. eight</li><li>4. <b>nine</b></li></ol>

Which of the following is not considered as a risk in project management?	1. Specification delays 2. Product competition 3. Testing 4. <b>Staff turnover</b>
Interaction Diagram is a combined term for	1. <b>Sequence Diagram + Collaboration Diagram</b> 2. Activity Diagram + State Chart Diagram 3. Deployment Diagram + Collaboration Diagram 4. None
Which of the following is not a SQA plan for a project?	1. evaluations to be performed 2. <b>amount of technical work</b> 3. audits and reviews to be performed 4. documents to be produced by the SQA group
	documents to be produced by the SQA group

Which of the following process is concerned with analyzing the costs and benefits of proposed changes?	1. <b>Change management</b> 2. Version management 3. System building 4. Release management
Which of the following term is best defined by the statement “The creation of a new codeline from a version in an existing codeline”?	1. <b>Branching</b> 2. Merging 3. Codeline 4. Mainline
Which of the following is a project scheduling method that can be applied to software development?	1. PERT 2. CPM 3. CMM 4. <b>both PERT and CPM</b>
Which granularity level of testing checks the behavior of module cooperation?	1. Unit Testing

	<p>2.</p> <p><b>Integration Testing</b></p> <p>3.</p> <p>Acceptance Testing</p> <p>4.</p> <p>Regression Testing</p>
Which of the following is a black box testing strategy?	<p>1.</p> <p>All Statements Coverage</p> <p>2.</p> <p>Control Structure Coverage</p> <p>3.</p> <p><b>Cause-Effect Graphs</b></p> <p>4.</p> <p>ALL</p>
One of the fault base testing techniques is	<p>1.</p> <p>unit testing.</p> <p>2.</p> <p>beta testing.</p> <p>3.</p> <p>Stress testing.</p> <p>4.</p> <p><b>mutation testing.</b></p>
Changes made to an information system to add the desired but not necessarily the required features is called	<p>1.</p> <p>Preventative maintenance.</p> <p>2.</p> <p>Adaptive maintenance.</p> <p>3.</p> <p>Corrective maintenance.</p>

	<p>4.</p> <p><b>Perfective maintenance.</b></p>
<p>If every requirement stated in the Software Requirement Specification (SRS) has only one interpretation, SRS is said to be</p>	<p>1.</p> <p>correct.</p> <p>2.</p> <p><b>unambiguous.</b></p> <p>3.</p> <p>consistent.</p> <p>4.</p> <p>verifiable.</p>
<p>The importance of software design can be summarized in a single word</p>	<p>1.</p> <p>accuracy</p> <p>2.</p> <p>complexity</p> <p>3. efficiency</p> <p><b>4. quality</b></p>
<p>Polymorphism reduces the effort required to extend an object system by</p>	<p>1. Coupling objects together more tightly</p> <p>2.</p> <p>enabling a number of different operations to share the same name.</p> <p>3. making objects more dependent on one another</p> <p>4.</p> <p><b>removing the barriers imposed by encapsulation.</b></p>

A fault simulation testing technique is	<ol style="list-style-type: none"> <li>1. <b>Mutation testing</b></li> <li>2. Stress testing</li> <li>3. Black box testing</li> <li>4. White box testing</li> </ol>
SRS is also known as specification of	<ol style="list-style-type: none"> <li>1. White box testing</li> <li>2. Stress testing</li> <li>3. Integrated testing</li> <li>4. <b>Black box testing</b></li> </ol>
A COCOMO model is	<ol style="list-style-type: none"> <li>1. Common Cost Estimation Model.</li> <li>2. <b>Constructive Cost Estimation Model.</b></li> <li>3. Complete Cost Estimation Model.</li> <li>4. Comprehensive Cost Estimation Model.</li> </ol>



In the spiral model 'risk analysis' is performed	<p>1. In the first loop</p> <p>2. in the first and second loop</p> <p>3. <b>In every loop</b></p> <p>4. before using spiral model</p>
Thresholding function in contrast stretching creates	<p><b>1.binary image</b> 2.high quality image 3.low quality image</p> <p>4.enhanced image</p>
For a well understood data processing application it is best to use	<p>1. <b>The waterfall model</b></p> <p>2. prototyping model</p> <p>3. the evolutionary model</p> <p>4. the spiral model</p>
Modifying the software to match changes in the ever changing environment is called	<p>1. <b>adaptive maintenance</b></p> <p>2. corrective maintenance</p> <p>3. perfective maintenance</p> <p>4. preventive maintenance</p>

Which statement is true:	1. <b>Standard form must consists of minterms</b> 2. All standard form are canonical forms 3. Canonical form can consist of a term with a literal missing 4. All canonical form are standard form
A binary code that progresses such that only one bit changes between two successive codes is:	1. <b>Gray code</b> 2. excess-3 code 3. 8421 code 4. nine's-complement code
Identify the proper data direction and modes of operation of the 8255 ports if the control word written into it is 9BH.	1. Port A as output 2. Port C lower as output <b>3. Port C upper as input</b> 4. Port B as output
Which of the following command words need to be programmed to operate a single PIC in fully nested mode with an 8086 microprocessor	1. ICW1 and ICW2 2. <b>ICW1, ICW2 and ICW4</b> 3. ICW2 and ICW3 4. ICW1 and ICW4
When operated in slave mode, the PIC outputs its type number only if the cascaded address received on CAS0CAS2 matches the address programmed in ----- bits D0D2	<b>1. ICW1 2. ICW2 3. ICW3 4. ICW4</b>
The truth table X Y f(X,Y) 0 0 0 0 1 0 1 0 1 1 1 1  represents the Boolean function	1. <b>X</b>  2.  X+Y  3. X'Y'  4.  Y

<p>Consider a main memory system that consists of 8 memory modules attached to the system bus, which is one word wide. When a write request is made, the bus is occupied for 100 nanoseconds (ns) by the data, address, and control signals. During the same 100 ns, and for 500 ns thereafter, the addressed memory module executes one cycle accepting and storing the data. The (internal) operation of different memory modules may overlap in time, but only one request can be on the bus at any time. The maximum number of stores (of one word each) that can be initiated in 1 millisecond is</p>	<ol style="list-style-type: none"> <li>1. 5535</li> <li>2. 65335</li> <li>3. 53892</li> <li>4. <b>10000</b></li> </ol>
<p>Multiprogramming systems _____</p>	<ol style="list-style-type: none"> <li>1. Are easier to develop than single programming systems</li> <li>2. Execute each job faster</li> <li>3. <b>Execute more jobs in the same time</b></li> <li>4. Are used only on large main frame computers</li> </ol>

<p>The performance of cache memory is frequently measured in terms of a quantity called</p>	<p>1. <b>hit ratio</b></p> <p>2.</p> <p>miss ratio</p> <p>3. average ratio</p> <p>4.</p> <p>ratio</p>
<p>Consider the following two sets of LR(1) items of an LR(1) grammar.</p> <p><math>X \rightarrow c.X, c/d</math></p> <p><math>X \rightarrow .cX, c/d</math></p> <p><math>X \rightarrow .d, c/d</math></p> <p><math>X \rightarrow c.X, \\$</math></p> <p><math>X \rightarrow .cX, \\$</math></p> <p><math>X \rightarrow .d, \\$</math></p> <p>Which of the following statements related to merging of the two sets in the corresponding LALR parser is/are FALSE?</p> <p>1. Cannot be merged since look aheads are different.</p> <p>2. Can be merged but will result in S-R conflict.</p>	<p>1. 1 only 2. 2 only</p> <p>3.</p> <p>1 and 4 only</p> <p>4.</p> <p><b>1,2,3,4</b></p>
<p>3. Can be merged but will result in R-R conflict.</p> <p>4. Cannot be merged since goto on c will lead to two different sets.</p>	
<p>Which of the following statements are TRUE?</p> <p>I. There exist parsing algorithms for some programming</p>	

<p>languages whose complexities are less than <math>O(n^3)</math>.</p> <p>II. A programming language which allows recursion can be implemented with static storage allocation.</p> <p>III. No L-attributed definition can be evaluated in The framework of bottom-up parsing.</p> <p>IV. Code improving transformations can be performed at both source language and intermediate code level.</p>	<p>1. I and II</p> <p>2. <b>I and IV</b></p> <p>3. III and IV</p> <p>4. I, II and III</p>
<p>Which of the following describes a handle (as applicable to LR-parsing) appropriately?</p>	<p>1. It is the position in a sentential form where the next shift or reduce operation will occur</p> <p>2. It is non-terminal whose production will be used for reduction in the next step</p> <p>3. It is a production that may be used for reduction in a future step along with a position in the sentential form where the next shift or reduce operation will occur</p> <p>4. <b>It is the production p that will be used for reduction in the next step along with a position in the sentential form where the right hand side of the production may be found</b></p>

<p>The grammar <math>A \rightarrow AA \mid (A) \mid \epsilon</math> is not suitable for predictive parsing because the grammar is</p>	<p>1. ambiguous</p> <p>2. <b>left-recursive</b></p> <p>3. right-recursive</p> <p>4. an operator-grammar</p>
<p>Consider the grammar</p> $S \rightarrow (S) \mid a$ <p>Let the number of states in SLR(1), LR(1) and LALR(1) parsers for the grammar be <math>n_1</math>, <math>n_2</math> and <math>n_3</math> respectively. The following relationship holds good</p>	<p>1. <math>n_1 &lt; n_2 &lt; n_3</math></p> <p>2. <b><math>n_1 = n_3 &lt; n_2</math></b></p> <p>3. <math>n_1 = n_2 = n_3</math></p> <p>4. <math>n_1 &gt; n_2 &gt; n_3</math></p>
<p>Which of the following grammar rules violate the requirements of an operator grammar ? P, Q, R are nonterminals, and r, s, t are terminals.</p> <ol style="list-style-type: none"> <li><math>P \rightarrow QR</math></li> <li><math>P \rightarrow QsR</math></li> <li><math>P \rightarrow \epsilon</math></li> <li><math>P \rightarrow QtRr</math></li> </ol>	<p>1. <b>1 and 3 only</b></p> <p>2. 1 only</p> <p>3. 2 and 3 only</p> <p>4. 1,2,3 and 4 only</p>

<p>Consider the grammar with the following translation rules and E as the start symbol.</p> <p><math>E \rightarrow E1 \# T \{ E.value = E1.value * T.value \}</math></p> <p><math>\quad   T \{ E.value = T.value \}</math></p> <p><math>T \rightarrow T1 \&amp; F \{ T.value = T1.value + F.value \}</math></p> <p><math>\quad   F \{ T.value = F.value \}</math></p> <p><math>F \rightarrow num \{ F.value = num.value \}</math></p> <p>Compute E.value for the root of the parse tree for the expression: 2 # 3 &amp; 5 # 6 &amp; 4.</p>	<p>1. 200</p> <p>2. 180</p> <p>3. 160</p> <p>4. 40</p>
<p>In a bottom-up evaluation of a syntax directed definition, inherited attributes can</p>	<p>1. always be evaluated</p> <p>2. be evaluated only if the definition is L-attributed</p> <p>3. be evaluated only if the definition has synthesized attributes</p> <p>4. never be evaluated</p>
<p>If the PIC outputs the type number of C8H, the CPU will retrieve the vector stored in the address -----</p>	<p>1.00320H - 00323H 2.00324H - 00327H</p> <p>3.00223H - 00226H 4.00140H - 00143H</p>
<p>Which Instruction word is used to specify the number of stop bits, data bits, parity bit and the baud rate clock factor for the 8251A USART</p>	<p>1.Mode 2.Command followed by Mode</p> <p>3.Command 4.Mode followed by command</p>
<p>How many operating modes are available in 8253A.</p>	<p>1.1 2.2 3.6 4.3</p>
<p>What does microprocessor speed depends on</p>	<p>1.Clock 2.Address bus width 3.Data bus width 4.Size of register</p>

Consider the grammar shown below.  $S \rightarrow C C$ $C \rightarrow c C \mid d$ The grammar is	1. <b>LL(1)</b> 2. SLR(1) but not LL(1) 3. LALR(1) but not SLR(1) 4. LR(1) but not LALR(1)
The interrupt cycle ends when the ..... instruction is executed	1.IRET 2.CALL 3. <b>PUSH</b> 4.POP
A 32-bit address bus allows access to a memory of capacity	1.1 GB 2.16 MB 3.64 MB 4. <b>4 GB</b>
Which design model is analogous to the detailed drawings of the access points and external utilities for a house?	1. Architectural design 2. Component-level design 3. Data design 4. <b>Interface design</b>
1. The 40-20-40 rule suggests that the least amount of development effort can be spent on	1.Estimation and planning 2. Analysis and design 3. <b>Coding</b> 4. Testing





<p>A. Lexical analysis      1. Graph coloring</p> <p>B. Parsing                2. DFA minimization</p> <p>C. Register allocation    3. Post-order traversal</p> <p>D. Expression evaluation   4. Production tree</p> <p>Codes:</p> <p>A B C D</p> <p>(a) 2 3 1 4</p> <p>(b) 2 1 4 3</p> <p>(c) 2 4 1 3</p> <p>(d) 2 3 4 1</p>	<p>1. a 2. b <b>3. c</b> 4. d</p>
<p>Among simple LR (SLR), canonical LR, and look-ahead LR (LALR), which of the following pairs identify the method that is very easy to implement and the method that is the most powerful, in that order?</p>	<p>1. SLR , LALR</p> <p>2. CLR , LALR</p> <p>3. <b>SLR , CLR</b></p> <p>4. SLR</p>
<p>_____ adds to the costs of Software Development because it usually means that work that has been completed has to be redone</p>	<p>1. Picture quality</p> <p>2. Production</p> <p>3. Software speed</p> <p>4. <b>Change</b></p>

1. Graphical representation of the project, showing each task and activity as horizontal bar whose length is proportion to time taken for a completion of that activity is called	1. <b>Gantt Chart</b> 2. Structure Chart 3. Pert Chart 4. Time Line
1. Software deteriorates rather than wears out because	1. Software suffers from exposure to hostile environments 2. Defects are more likely to arise after software has been used often 3. <b>Multiple change requests introduce errors in component interactions</b> 4. Software spare parts become harder to order
1. The prototyping model of software development is	1. A reasonable approach when requirements are well defined 2. <b>A Useful approach when a customer cannot define requirements clearly</b> 3. The best approach to use projects with larger development teams 4. A risky model that rarely produces a meaningful product

A professional software engineer must:	1. be loyal to the organization 2. build trust from customers 3. socialize with customers 4. be loyal to the organization and build trust from customers
The status that cannot be operated by direct instructions is	1.Z 2.Cy 3.P 4.AC
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  $S \rightarrow aB$ $S \rightarrow bA$ $B \rightarrow b$ $A \rightarrow a$ $B \rightarrow bS$ $A \rightarrow aS$ $B \rightarrow aBB$ $A \rightarrow bAA$  Which of the following strings is generated by the grammar?	1. aaaabb 2. aabbbb 3. aabbab 4. abbbba
The first processor to include Virtual memory in the Intel microprocessor family was	1.Pentium 2.80486 3.80286 4.80386

Generic process models are:	<ol style="list-style-type: none"> <li>1. waterfall, componet-based, iterative</li> <li>2. waterfall, structural, component-based</li> <li>3. sequential, waterfall, iterative</li> <li>4. <b>component-based, object-oriented, iterative</b></li> </ol>
It is ok to have a single ideal approach to develop a software.	<ol style="list-style-type: none"> <li>1. True</li> <li>2. <b>False</b></li> <li>3. 4.</li> </ol>
The language $L = \{0^i 2^j 1^k \mid i \geq 0\}$ over the alphabet $\{0, 1, 2\}$ is:	<ol style="list-style-type: none"> <li>1. not recursive</li> <li>2. <b>is recursive and is a deterministic CFL</b></li> <li>3. is a regular language</li> <li>4. is not a deterministic CFL but a CFL</li> </ol>
In <code>mysql_fetch_array()</code> , if two or more columns of the result have the same field names, what action is taken?	<ol style="list-style-type: none"> <li>1. the first column will take precedence</li> <li>2. the column is skipped</li> <li>3.</li> </ol>

	<p>the last column will take precedence</p> <p>4.</p> <p>an error is thrown.</p>
Which of the following attribute is needed for file upload via form?	<p>1.</p> <p><b>enctype='multipart/form-data'</b></p> <p>2. enctype='singlepart/data'</p> <p>3.</p> <p>enctype='file'</p> <p>4.</p> <p>enctype='form-data/file'</p>
What library do you need in order to process images?	<p>1.</p> <p><b>GD library</b></p> <p>2.</p> <p>ZIP library</p> <p>3.</p> <p>Win32 API library</p> <p>4.</p> <p>BOGUS library</p>
You need to check the size of a file in PHP function. \$size = X(filename); Which function will suitably replace 'X'?	<p>1.</p> <p><b>filesize</b></p> <p>2. size</p> <p>3.</p> <p>sizeofFile</p> <p>4.</p> <p>getSize</p>

Which of the following function is used to terminate the script execution in PHP?	1. break() 2. quit() 3. <b>die()</b> 4. exit()
Which method is used to search for a substring?	1. stringVariable.substring(subString) 2. stringVariable.find(subString) 3. <b>stringVariable.indexOf(subString)</b> 4. stringVariable.indexOf(charAt(0))
Which is the correct way to write a JavaScript array?	1. var txt = new Array(1:"tim",2:"kim",3:"jim") 2. var txt = new Array:1=("tim")2=("kim")3=("jim") 3. <b>var txt = new Array("tim","kim","jim")</b> 4. var txt = new Array="tim","kim","jim"

The _____ method of an Array object adds and/or removes elements from an array.	1. Slice  2.  Reverse
	3. Shift  4.  <b>Splice</b>
Consider the following code: var a = []; a.unshift(1); a.unshift(22); a.shift(); a.unshift(3,[4,5]); a.shift(); a.shift(); a.shift(); The final output for the shift() is	<b>1.1</b> 2.[4,5] 3.[3,4,5] 4.Exception
What does /^[^]* regular expression indicate ?	1.Match one or more characters that are not open parenthesis 2. <b>Match zero or more characters that are open paranthesis</b> 3.Match zero or more characters that are not open paranthesis 4.Match one or more characters that are open parenthesis
What gets printed? \$str = 'a\\b\\n'; echo \$str;	1.ab(newline) 2.a\b(newline) <b>3.a\b\n</b> 4.a\\b(newline)
What is the strpos() function used for?	1.Find the last occurrence of the string within a string <b>2.Find the first occurrence of the string within a string</b> 3.Find both last and first occurrence 4.Search for all occurrence within a string
The simplest image processing technique is	1. <b>coordinates transformation</b> 2.intensity transformation 3.spatial transformation 4.domain transformation
First derivative approximation says that values of constant intensities must be	1.1 <b>2.0</b> 3.positive 4.negative
If inspected in a browser, what will be the total width of the	



div in the following code snippet? #container { width: 600px; border: 2px solid #CCCCC; padding: 30px 20px; margin: 20px 10px 40px 10px;}	1. <b>664px</b> 2.660px 3.644px 4.600px
Which of the following is not a valid attribute of the INPUT tag?	1. <b>TEXT</b> 2.NAME 3.SIZE 4.MAXLENGTH
Which of these sets of HTML5 attributes can be used for form validation?	1. <b>required, pattern, min and max</b> 2.auto, fixed, number 3.number, text, currency 4.input, radio,checkbox
Which item is an example of a physical network address?	1.IP address 2. <b>MAC address</b> 3.Workstation name 4.www.proprofs.com
What is the following style an example of? img[alt~="Pie"]	1.Attribute Match 2.Exact Value Match 3. <b>Contains Value Match</b> 4.Subcode Match
What is the correct CSS syntax for making all the elements bold?	1. <b>p {font-weight:bold;}</b> 2.p style="textsize:bold" 3.p {text-size:bold} 4.p style="font-size:bold">
How can you specify default text in an input field?	1.Using JavaScript 2.Using the 'text' attribute 3.Using the 'placeholder' element 4. <b>Using the 'placeholder' attribute</b>
The language $\{a^m b^n C^{m+n} \mid m, n \geq 1\}$ is	1. Regular language 2. <b>context free but not regular</b> 3. context sensitive but not context free 4. type-0 but not context sensitive

The language accepted by a Pushdown Automation in which the stack is limited to 10 items is best described as	1. <b>Regular</b> 2. context free 3. Recursive 4. Deterministic context free
Currently there is no single standard file type that can be used to play audio using the audio element consistently on all browsers. Which is the solution that the audio element provides to resolve this conflict?	1. Use JavaScript to determine the web browser in use 2. Use Adobe Flash to play the audio 3. <b>Include multiple audio file formats in the src</b> attribute 4. No Solution
Which of the following statements is true?	1. An INPUT field of type password provides excellent security 2. <b>An INPUT field of type password provides a masked field but no real security</b> 3. A maximum length can not be set for a password field 4. A password
	INPUT field can only be included in a FORM that uses the get METHOD
How do we prevent margins, borders and padding from overlapping?	1. Setting zero paddings and margins 2. <b>By displaying our list as block elements</b> 3. Using table cells 4. By displaying our list as inline elements
Which of the following ways below is correct to write a CSS?	1. p {color:red;text-align:center}; 2. p {color:red;text-align:center} <b>3. p {color:red;text-align:center;}</b> 4. p (color:red;text-align:center;)
Which of the following explains cookies nature?	1. Non Volatile 2. Volatile 3. Intransient 4. <b>Transient</b>
Consider the following code snippet: var a = [1,2,3,4,5]; a.slice(0,3); What is the possible output for the above code snippet?	1. <b>Returns [1,2,3]</b> 2. Returns [4,5] 3. Returns [1,2,3,4] 4. Returns [1,2,3,4,5]
Which property is used to obtain browser vendor and version information?	1. modal 2. version 3. browser 4. <b>navigator</b>

What is the result of the following code snippet? window.location === document.location	1.False <b>2.True</b> 3.0 4.1
The length property belongs to which of the following objects?	1.Window 2. <b>Element</b> 3.History 4.Document
----- is a built - in JavaScript function which can be used to execute another function after a given time interval.	1.Timeout( ) 2.TimeInterval( ) 3. <b>setTimeout ( )</b> 4.All of the above
How do substring() and substr() differ?	1.One is not a method of the String object. 2.substr() takes three arguments, substring() only two. <b>3.Only one accepts a desired string length as an argument.</b> 4.Besides the spelling, nothing.
What is the most essential purpose of paranthesis in regular expressions?	1.Define pattern matching techniques <b>2.Define subpatterns within the complete pattern</b> 3.Define portion of strings in the regular expression 4.All of the mentioned
Which of the following languages are context-free? L1 = {ambnanbm   L2 = {ambnambn   m , n ≥ 1 } m , n ≥ 1 }	1.L1 and L2 only 2. <b>L1 and L3 only</b> 3.

L3 = {ambn   m = 2n + 1}	L3 only 4.  L1 only
Which of the following is not possible using PHP?	1.Deleting files from the server 2.Redirect a visitor to another page3.Set the value of the window statusbar 4. <b>Obtain the IP address of a Visitor</b>
Which one of the following is the very first task executed by a session enabled page?	1.Delete the previous session 2.Start a new session 3. <b>Check whether a valid session exists</b> 4.Handle the session
What would be the output of the below code fragment? <code>var a = ["s","a","v","e"]; document.write(a.join(""));</code>	1.Undefined <b>2.save</b> 3.vase 4.S
The _____ property specifies the stack order of an element	1.d-index 2.s-index 3.x-index 4. <b>z-index</b>
Which of the following property allows you to specify an element's position with respect to the browser window?	1. <b>relative</b> 2.fixed 3.static 4.absolute
Internet Explorer uses ..... property to create transparent images.	1.-moz-opacity:x <b>2.filter: alpha(opacity=x)</b> 3.filter: beta(opacity=x) 4.-IE-opac:y
If para1 is the DOM object for a paragraph, what is the correct syntax to change the text within the paragraph?	1."New Text"? <b>2.para1.value="New Text"</b> ;3.para1.firstChild.nodeValue= "New Text"; 4.para1.nodeValue="New Text";
The syntax of Eval is _____	1.[objectName.]eval(numeriC) <b>2.[objectName.]eval(string)</b> 3.[EvalName.]eval(string) 4.[EvalName.]eval(numeriC)
Join is equal to	1. Cartesian Product  2. Combination of Union and Cartesian product  3. <b>Combination of selection and Cartesian product</b>  4. Combination of intersection and Cartesian product

Which of the following statement is false?	<p>1. <b>For <math>R = R1^*</math>, <math>L(R)</math> is empty if and only if <math>L(R1)</math> is empty</b></p> <p>2. For <math>R = (R1)</math>, <math>L(R)</math> is empty if and only if <math>L(R1)</math> is empty</p> <p>3. For <math>R = R1R2</math>, <math>L(R)</math> is empty if and only if either <math>L(R1)</math> or <math>L(R2)</math> is empty.</p> <p>4. If <math>R = R1 + R2</math>, <math>L(R)</math> is empty if and only if both <math>L(R1)</math> and <math>L(R2)</math> are empty.</p>
The system having memory elements are called.	<p>1. <b>sequential circuits</b></p> <p>2. complex circuits</p> <p>3. combinational circuits</p> <p>4. logic circuits</p>
The ESC instruction of 8086 may have two formats. In one of the formats, no memory operand is used. Under this format, the number of external op-codes (for the co-processor) which can be specified is	1.64 <b>2.128</b> 3.256 4.512
DB, DW and DD directives are used to place data in particular location or to simply allocate space without preassigning anything to space. The DW and DD directives are used to generate	1.full address of labels <b>2.offsets of full address of labels and variables</b> 3.full address of variables 4.offsets
In a microprocessor, the service routine for a certain interrupt starts from a fixed location of memory which cannot be externally set, but the interrupt can be delayed or rejected. Such an interrupt is	1.maskable and non-vectored 2.nonmaskable and vectored <b>3.maskable and vectored</b> 4.non-maskable and non-vectored
The -----is neither an input nor an output; it is an internal bit programmed via the PC4(Port A) or PC2(Port B)bits	1.IFB 2.INTR 3. <b>INTE</b> 4.NMI

Functions that combines to produce $f(x,y)$	1.illumination and frequency 2.intensity and reflectance 3.illumination and radiance 4.illumination and reflectance
____ bit in ICW1 indicates whether the 8259A is cascade mode or not	1.LTIM=0 2.LTIM=1 3.SNGL=1 4.SNGL=0
Number of the times the instruction sequence below will loop before coming out of loop is, MOV AL, 00h A1: INC AL JNZ A1	1.255 2.01 3.00 4.256
The worst case running time to search for an element in a balanced binary search tree with $n*2^n$ elements is	1.theta( $n \log n$ ) 2.theta( $n*2^n$ ) 3.theta( $n$ ) 4.theta( $\log n$ )
8086 microprocessor is interfaced to 8253 a programmable interval timer. The maximum number by which the clock frequency on one of the timers is divided by	1.216 2.28 3.210 4.220
_____ signal prevent the microprocessor from reading the same data more than one	1.pipelining 2.handshaking 3.controlling 4.signaling
Which buffer is a parallel to serial converter that receives a parallel byte for conversion into a serial signal and further transmission onto the communication channel.	1.Transmit buffer 2.Receive buffer 3.Data bus buffer 4.Modem control
How to create a Date object in JavaScript?	1. <b>dateObjectName = new Date([parameters])</b> 2.dateObjectName.new Date([parameters]) 3.dateObjectName := new Date([parameters])4.dateObjectName Date([parameters])
What is the code to start displaying the time when document loads?	1.onload = displayTime; 2.window. = displayTime; 3. <b>window.onload = displayTime;</b> 4.window.onload = start;
Identify the accurate control word for operate counter 0, Read/Write LSB only, Mode 2, BCD countdown.	1.00010111B 2. <b>0001X111B</b> 3.00010101B 4.00110111B

To determine the architectural style or combination of styles that best fits the proposed system, requirements engineering is used to uncover	1. algorithmic complexity 2. <b>characteristics and constraints</b> 3. control and data 4. design patterns
In a BCD-to-seven-segment converter, why must a code converter be utilized?	1. to convert the 4-bit BCD into Gray code 2. <b>to convert the 4-bit BCD into 7-bit code</b> 3. to convert the 4-bit BCD into 10-bit code 4. No conversion is necessary
The ..... instruction is used to specify the number of stop bits, data bits, parity bit, and baud rate clock factor for the 8251 UART	1. bit set/reset 2. <b>Mode</b> 3. Command 4. Code
Using the 8259A, the INT input of the 8086 can be expanded to accommodate up to ----- prioritized interrupt inputs	1. 60 2. <b>64</b> 3. 16 4. 32
Which element is used to draw graphics images on a web page?	1. script 2. audio 3. embed 4. <b>canvas</b>
One of the main advantage of using src attribute is	1. It becomes self-cached 2. It makes the HTML file modular 3. It restricts manipulation in the HTML file 4. <b>It simplifies the HTML files</b>
How do you get information from a form that is submitted using the "get" method?	1. Request.QueryString; 2. <b>\$_GET[]</b> ; 3. Request.Form; 4. \$_POST[];
What does explode function in php do	1. <b>Used to convert a string to an array</b> 2. Used to split a given string into the number of chunks specified 3. Used to split a string by a string 4. Used to split string into two equal halves

Which command we use to set an image on background?	1.image-background:url('R4R_Logo.jpg') 2. <b>background-image:url('R4R_Logo.jpg')</b> 3.bg-image:url('R4R_Logo.jpg')4.backgroundimage:href('R4R_Logo.jpg')
Let L be a set accepted by a nondeterministic finite automaton. The number of states in non-deterministic finite automaton is $ Q $ . The maximum number of states in equivalent finite automaton that accepts L is	1. $ Q $ 2. $2 Q $ 3. $2 \text{ raise to power }  Q  * 1$
	4. <b><math>2 \text{ raise to power }  Q </math></b>
If AL= 7FH and instruction ADD AL,1 is given, specify the contents of the six status flag	1.CF=0,PF=0,AF=1,ZF=0,SF=1,OF=1 2.CF=0,PF=1,AF=0,ZF=0,SF=1,OF=1 3 .CF=0,PF=1,AF=1,ZF=0,SF=1,OF=1 <b>4.CF=0,PF=0,AF=1,ZF=0,SF=1,OF=0</b>
The starting address for counter 0 of 8253 is 0038H, then port address for control word register is	1.44H 2.49H <b>3.42H</b> 4.46H
The counters of 8253 can be operated in ---- modes of operation.	1.4 2.3 <b>3.6</b> 4.5
The other name for MODE 0 in 8253 timer is	1.software triggered strobe 2.Programmable one shot 3. <b>Interrupt on terminal count</b> 4.Square wave rate generator
Given the frequency $f=1.5\text{MHz}$ for 8253 timer the value of time period T is	1.10ms <b>2.0.66us</b> 3.1ms 4.100ms
The number of counters available in internal block diagram of 8253 is	1.2 2.1 <b>3.3</b> 4.4
The internal block diagram of 80286 contains ---- functional parts.	1.6 <b>2.4</b> 3.2 4.8
The 16-bit stack segment value is 5D27H and the offset is	1.5FFE0H 2.5FAE0H <b>3.5FEA0H</b> 4.12500H



2C30H. calculated physical address is ----	
Given the Extra segment ES = 52B9H and the offset BX=D470H. Calculated physical address is ---- -----	1.60000H 2.70000H 3.11000H 4. <b>11050H</b>
Identify the addressing mode for the instruction MOV AH,47H	1.Immediate addressing mode 2. <b>Direct addressing mode</b> 3.Based addressing mode 4.Indirect addressing mode
The 16-bit data segment value is 1000H and the offset is 2000H. calculated physical address is ----	1.10000H 2.11000H 3. <b>12000H</b> 4.12500H
Given the Code segment CS = 1000H and the offset BX=0050H. Calculated physical address is ---- -----	1.10000H 2. <b>10050H</b> 3.11050H 4.11000H
If AL=C0H, Determine the content of the register AL after SAL AL,1 instruction is executed.	1.E0H 2. <b>80H</b> 3.0CH 4.0EH
Assume the base address of CS is 3000H and IP is 2000H. Calculate the memory address.	1. <b>32000H</b> 2.3000H 3.30000H 4.2000H
Identify different segments in a program	1.only code segment 2.data and code segment 3.only data segment 4. <b>data, code, stack and extra segments</b>
what is the need of segmenting the memory in 8086	1.Increase the memory accessibility 2. <b>Increase the memory addressability</b> 3.easy to retrieve data 4.faster access
How many select lines would be required for an 8-line-to-1line multiplexer?	1. 2 2. 4 3. <b>3</b> 4. 8
The value in AL=11011010 after the operation of CBW, the result is	1.AX=1101 1010 1111 1111 2.AX=1101 1010 0000 0000 3. <b>AX=1111 1111 1101 1010</b> 4.AX=0000 0000 1101 1010

Given CF=0, BX=00111011 01110101 ROR BX,1. The result is	1.CF=1 BX=10011101 10111010 2.CF=1 BX=10100111 01101110 3.CF=0 BX=01001110 11011101 4.CF=0 BX=01010011 10110111
Consider 2 scenarios: C1: For DFA ( $\varphi, \Sigma, \delta, q_0, F$ ), if $F = \varphi$ , then $L = \Sigma^*$ C2: For NFA ( $\varphi, \Sigma, \delta, q_0, F$ ), if $F = \varphi$ , then $L = \Sigma^*$ Where $F =$ Final states set $\varphi =$ Total states set  Choose the correct option ?	1. Both are true 2. Both are False 3. C1 is true, C2 is false 4. C1 is false, C2 is true
Which of the following paging algorithms is most likely to be used in a virtual memory system?	1. FIFO 2. Second chance
	3. Least Recently Used 4. Least Frequently Used
One can safely state that the output lines for a demultiplexer are under the direct control of the:	1. input data select lines 2. the internal OR gate 3. the internal AND gates 4. Input data line

What is the main difference between traps and interrupts?	<p>1.</p> <p><b>How they are initiated</b></p> <p>2.</p> <p>The kind of code that's used to handle them</p> <p>3.</p> <p>Whether or not the scheduler is called</p> <p>4.</p> <p>How the operating system returns from them</p>
Having more than one constructor in a class is	<p>1. not possible</p> <p>2. compile time polymorphism</p> <p><b>3. constructor overriding</b></p> <p>4. error</p>
FAT file system is	<p>1. <b>Indexed Allocation and used in Windows OS</b></p> <p>2. used in Windows OS</p> <p>3. about storage in RAM</p> <p>4. Indexed Allocation.</p>
Quantitative methods for assessing the quality of proposed architectural designs are readily available.	<p>1.</p>
	<p>TRUE</p> <p>2.</p> <p><b>FALSE</b></p> <p>3. 4.</p>

Which of the following is a complete function?	1. void funct(int) { printf("Hello"); } 2. int funct(); 3. void funct(x) { printf("Hello"); } 4. <b>int funct(int x) { return x=x+1; }</b>
IF Y is a subset of X then	1. X --> Y 2. <b>Y --&gt;X</b> 3. Y -->--> X 4. X is a sub set of Y
Overloading the function operator	1.usually make use of a constructor that takes arguments. 2.allows you to create objects that act syntactically like functions. 3. <b>requires a class with an overloaded operator</b> . 4.requires a class with an overloaded [ ] operator.
The node type for document returns the value ---.	1.2 2.9 3.3 <b>4.8</b>
Which of the following is NOT a valid PHP comparison operator?	1.!= 2.>= <b>3.&amp;&amp;&amp;</b> 4.===
\$a = array( null => 'a', true => 'b', false => 'c', 0 => 'd', 1 => 'e', " => 'f' ); echo count(\$a), "\n"; What will be printed?	1.2 <b>2.3</b> 3.4 4.5
\$a = array(); if (\$a[1]) null; echo count(\$a), "\n"; What will be printed?	<b>1.0</b> 2.1 3.2 4.Code wont work
How do we access the value of 'd' later? \$a = array( 'a', 3 => 'b', 1 => 'c', 'd' );	1.\$a[0] 2.\$a[1] 3.\$a[2] 4. <b>\$a[4]</b>

<p>A major problem with priority scheduling is _____.</p>	<ol style="list-style-type: none"> <li>1. Definite blocking</li> <li>2. <b>Starvation</b></li> <li>3. Low priority</li> <li>4. None of these</li> </ol>
<p>Buffering is useful because</p>	<ol style="list-style-type: none"> <li>1. It makes it seem like there's more memory in the computer</li> <li>2. It reduces the number of memory copies required</li> <li>3. It allows all device drivers to use the same code</li> <li>4. <b>It allows devices and the CPU to operate asynchronously</b></li> </ol>
<p>When the overall flow in a segment of a data flow diagram is largely sequential and follows straight-line paths, _____ is present.</p>	<ol style="list-style-type: none"> <li>1. low coupling</li> <li>2. good modularity</li> <li>3. <b>transaction flow</b></li> </ol>

	4.  transform flow
What is the difference between echo and print?	1.They both behave the same. 2.Print can take multiple parameters where as echo cannot 3. <b>Echo can take multiple parameters where as print cannot</b> 4.Print is a function where as echo is not.
How many flip-flops are required to construct a mod10 counter?	1.10 2.8 3.5 <b>4.4</b>
It is difficult to design asynchronous sequential circuit because.	1.External clock is to be provided 2.It is using Flip flops 3.It is more complex 4. <b>Generally they involve stability problem</b>
Memory elements in clocked sequential circuits are called.	1.latches 2.gates 3.signals <b>4.flipflop</b>
How can we count the number of elements in an array?	1.Using sizeof() 2.count() 3.Writing a user defined function and using array_search() <b>4.using sizeof() and count()</b>
How do I create PHP arrays in a HTML ?	1.< input name= MyArray[]/> 2.< input ="MyArray[]" /> <b>3.&lt; input name="MyArray[]" /&gt;</b> 4.< input MyArray[] />
What is the default size of a file set in upload_max_filesize ?	1.1 MB <b>2.2 MB</b> 3.2.5 MB 4.3 MB
What happens if no file path is given in include() function?	1.PHP continues to execute the script. 2.Results in a fatal error3. <b>Include_path is made use of</b> 4.It haults the script.
What is the default execution time set in set_time_limit()?	1.20 secs <b>2.30 secs</b> 3.40 secs 4.50 secs
When the pre-order and post-order traversal of a Binary Tree generates the same output, the tree can have maximum	1.Three nodes 2.Two nodes <b>3.One node</b> 4.Any number of nodes

Drop SQL clause	<p>1.</p> <p>Drops only the values from the table</p> <p>2.</p> <p><b>drops structure of the table along with values</b></p>
	<p>3.</p> <p>None of the options</p> <p>4.</p> <p>changes the structure of the table</p>
The function used to remove the leading spaces is	<p>1. <b>ltrim</b></p> <p>2. lpad</p> <p>3.</p> <p>rpad</p> <p>4.</p> <p>rtrim</p>
_____ function in PHP returns a list of response headers sent (or ready to send)	<p>1.header() <b>2.headers_list()</b> 3.header_sent()</p> <p>4.header_send()</p>
_____ is a high speed cache used to hold recently referenced page table entries as a part of paged virtual memory	<p>1.</p> <p><b>Translation Look-aside buffer</b></p> <p>2.</p> <p>Inverse page table</p> <p>3.</p> <p>Segmented page table</p> <p>4.</p> <p>Hierarchical page table</p>

Synchronous counters eliminate the delay problems encountered with asynchronous (ripple) counters because the.	1.input clock pulses are applied simultaneously to each stage 2.input clock pulses are applied only to the first and last stages 3.input clock pulses are applied only to the last stage 4 .input clock pulses are not used to activate any of the counter stages
SR Flip flop can be converted to T-type flip-flop if ?	1. is connected to Q
	2.R is connected to Q  3.Both S and R are shortend  4.S and R are connected to Q and Q' respectively
In any undirected graph, the sum of the degrees of all nodes is:	1.is twice number of edges 2.is always ODD 3.need not be even4.must be even
The number of clock pulses needed to shift one byte of data from input to the output of a 4-bit shift register is.	1.10 2.12 3.16 4.32
What is asynchronous counter.	1.none of them 2.A master clock triggers all the flip-flops at a time 3.all the flip-flop are combined to common clock 4.each flip-flop has it own clock
Given the language $L = \{ab, aa, baa\}$ , which of the following strings are in $L^*$ ?  1) abaabaaabaa 2) aaaabaaaa 3) baaaaabaaaab 4) baaaaabaa	1. 1, 2 and 3 2. 1, 2 and 4 3. 1, 3 and 4 4. 2, 3 and 4



<p>The Hardware mechanism that enables a device to notify the CPU is called _____.</p>	<ol style="list-style-type: none"> <li>1. Polling</li> <li>2. <b>Interrupt</b></li> <li>3. Systems Call</li> <li>4. None of these</li> </ol>
<p>In the running state</p>	<ol style="list-style-type: none"> <li>1. <b>only the process which has control of the processor is found</b></li> <li>2. all the processes waiting for I/O to be completed are found</li> <li>3. all the processes waiting for the processor are found</li> <li>4. everything in these options are found</li> </ol>
<p>In the context of object-oriented software engineering a component contains</p>	<ol style="list-style-type: none"> <li>1. attributes and operations</li> <li>2. instances of each class</li> <li>3. roles for each actor (device or user)</li> <li>4. <b>a set of collaborating classes</b></li> </ol>

What is meant by parallel-loading the register?	1.Shifting the data in all flip-flops simultaneously 2.Loading data in two of the flip-flops <b>3.Loading data in all flip-flops at the same time</b> 4.Momentarily disabling the synchronous SET and RESET inputs
What is the condition for resetting( $s=0$ ) the S flag in status register?	1.MSB of the result is One <b>2.MSB of the result is zero</b> 3.LSB of the result is one 4 .LSB of the result is zero
Let $w$ be any string of length $n$ is $\{0,1\}^*$ . Let $L$ be the set of all substrings of $w$ . What is the minimum number of states in a non-deterministic finite automaton that accepts $L$ ?	1. <b><math>n+1</math></b> 2. $n$
	3. $n-1$  4.  $2n+1$
Which one of the following is FALSE?	1. There is unique minimal DFA for every regular language 2. Every NFA can be converted to an equivalent PDA 3. Complement of every context-free language is recursive 4. <b>Every nondeterministic PDA can be converted to an equivalent deterministic PDA</b>

Classes and components that exhibit functional, layer, or communicational cohesion are relatively easy to implement, test, and maintain.	<p>1. <b>true</b></p> <p>2.</p> <p>false</p> <p>3. 4.</p>
Which of the following statements is false?	<p>1.</p> <p>Every NFA can be converted to an equivalent DFA</p> <p>2.</p> <p>Every non-deterministic Turing machine can be converted to an equivalent deterministic Turing machine</p> <p>3.</p>
	<p>Every regular language is also a contextfree language</p> <p>4.</p> <p><b>Every subset of a recursively enumerable set is recursive</b></p>
In PHP, which of the following function is used to insert content of one php file into another php file before server executes it	<p>1.include[] 2.#include() <b>3.include()</b></p> <p>4.#include{}</p>
The kernel keeps track of the state of each task by using a data structure called ____	<p>1.</p> <p><b>Process control block</b></p> <p>2.</p> <p>Process Status Word</p> <p>3.</p> <p>Memory control block</p> <p>4.</p> <p>None of these</p>

The major source of data for other systems are:	1. Electronic Switching System <b>2. Transaction Processing Systems</b> 3. Decision Support System 4. Management Information System
Consider an undirected random graph of eight vertices. The probability that there is an edge between a pair of vertices is $\frac{1}{2}$ . What is the expected number of unordered cycles of length three?	1. $\frac{1}{8}$ 2. 1 <b>3.</b> <b>7</b> 4. 8
What type of declaration is this:	1.
unsigned num;	num is unsigned integer 2. num is unsigned float 3. num is unsigned character 4. <b>Invalid declaration</b>
Which of the following statements best describes the operation of a synchronous up-/down-counter?	<b>1. In general, the counter can be reversed at any point in its counting sequence.</b> 2. The counter can be reversed, but must be reset before counting in the other direction. 3. The counter can count in either direction, but must continue in that direction once started. 4. The count sequence cannot be reversed, once it has begun, without first resetting the counter to zero.

Which segments of a seven-segment display would be active to display the decimal digit 2?	1.a, c, d, f, and g 2.a, b, c, d, and g <b>3.a, b, d, e, and g</b> 4.a, b, c, d, e, and f
In the absolute the addressing mode	1. <b>The operand is inside the instruction</b> 2. The address of the operand is inside the instruction 3. The register containing the address of the operand is specified inside the instruction 4. The location of the operand is implicit
Which of the following addressing modes are suitable for program relocation at run time?  1. Absolute addressing 2. Based addressing	1. 1 and 4 2.
3. Relative addressing 4. Indirect addressing	1 and 2 3. 2 and 3  <b>4.</b> <b>1,2 and 4</b>
What is the minimum number of NAND gates required to implement $A + AB' + AB'C$ ?	<b>1.0</b> 2.1 3.2 4.3

Which of the following is TRUE?	1. <b>Every subset of a regular set is regular.</b> 2. Every finite subset of a non-regular set is regular. 3. Every finite subset of a non-regular set is regular. 4. Infinite union of finite sets is regular.
Which of the following is not a form of memory ?	1. Instruction cache 2. Instruction register 3. <b>Instruction opcode</b> 4. Translation-a-side buffer
Which JavaScript function is most useful for finding errors?	1.Confirm 2.Prompt <b>3.Debug</b> 4.Alert
JavaScript RegExp Object has modifier 'i' to _____	1.Perform case-sensitive matching <b>2.Perform case-insensitive matching</b> 3.Perform both case-sensitive &
	case-insensitive matching 4.None of the these
You can find the element you want to manipulate by _____ way?	1.getElementById() 2.getElementsByTagName() 3 .getElements ByClassName() 4. <b>All of the these</b>

_____ does the job of allocating a process to the processor.	1. Long term scheduler 2. Short term scheduler (CPU Scheduler) 3. Medium term scheduler 4. <b>Dispatcher</b>
The length of the shortest string NOT in the language (over $\Sigma = \{a, b\}$ ) of the following regular expression is _____. $a^*b^*(ba)^*a^*$	1. 2. <b>2.</b> <b>3.</b> 3. 4. 4. 5
Consider the regular language $L = (111 + 11111)^*$ . The minimum number of states in any DFA accepting this languages is:	1. 3 2. 5 3. 8 <b>4.</b> <b>9</b>

<p>The smallest finite automation which accepts the language <math>\{x \mid \text{length of } x \text{ is divisible by } 3\}</math> has :</p>	<p>1. 2 states 2. 3 states <b>3. 4 states</b></p> <p>4.</p> <p>5 states</p>
<p>The DMA controller has _____ registers</p>	<p>1.</p> <p>4</p> <p>2.</p> <p>2</p> <p><b>3.</b></p> <p><b>3</b></p> <p>4.</p> <p>1</p>
<p>The rate at which a computer clock deviates from a perfect reference clock is called as</p>	<p>1.</p> <p>Clock rate</p> <p>2.</p> <p>Clock speed</p> <p>3.</p> <p><b>clock drift rate</b></p> <p>4.</p> <p>Transmission Bandwidth</p>
<p>Consider a join (relation algebra) between relations <math>r(R)</math> and <math>s(S)</math> using the nested loop method. There are 3 buffers each of size equal to disk block size, out of which one</p>	<p>1.</p> <p><b>Relation <math>r(R)</math> is in the outer loop.</b></p> <p>2.</p>



buffer is reserved for intermediate results. Assuming size(r(R))	
	<p>Relation s(S) is in the outer loop.</p> <p>3.</p> <p>Join selection factor between r(R) and s(S) is more than 0.5</p> <p>4.</p> <p>Join selection factor between r(R) and s(S) is less than 0.5.</p>
Consider a DFA over $\Sigma = \{a, b\}$ accepting all strings which have number of a's divisible by 6 and number of b's divisible by 8. What is the minimum number of states that the DFA will have?	<p>1.</p> <p>8</p> <p>2. 14</p> <p>3. 15</p> <p>4.</p> <p><b>48</b></p>
How many minimum states are required in a DFA to find whether a given binary string has odd number of 0's or not, there can be any number of 1's.	<p>1.</p> <p>1</p> <p><b>2.</b></p> <p><b>2</b></p> <p>3.</p> <p>3</p> <p>4.</p> <p>4</p>

<p>A Stack-organized Computer uses instruction of</p>	<p>1. Indirect addressing</p> <p>2. Two-addressing</p> <p>3. <b>Zero addressing</b></p> <p>4. Index addressing</p>
<p>A graphical display of the fundamental products in a truth table is known as</p>	<p>1. Mapping</p> <p>2. Graphing</p> <p>3. T-map</p> <p>4. <b>Karnaugh-Map</b></p>
<p>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 (i.e., of type <math>A \rightarrow \epsilon</math> and <math>A \rightarrow a</math>) to parse a string with <math>n</math> tokens?</p>	<p>1. <math>n/2</math></p> <p>2. <b><math>n-1</math></b></p> <p>3. <math>2n-1</math></p> <p>4. <math>2^n</math></p>

<p>Consider the following two sets of LR(1) items of an LR(1) grammar.</p> <p><math>X \rightarrow c.X, c/d</math></p> <p><math>X \rightarrow .cX, c/d</math></p> <p><math>X \rightarrow .d, c/d</math></p> <p><math>X \rightarrow c.X, \\$</math></p> <p><math>X \rightarrow .cX, \\$</math></p> <p><math>X \rightarrow .d, \\$</math></p>	<p>1. 1 only 2. 2 only</p> <p>3.</p> <p>3 and 4 only</p> <p>4.</p> <p><b>1,2,3,4</b></p>
<p>Which of the following statements related to merging of the two sets in the corresponding LALR parser is/are FALSE?</p> <p>1. Cannot be merged since look aheads are different.</p> <p>2. Can be merged but will result in S-R conflict.</p> <p>3. Can be merged but will result in R-R conflict.</p> <p>4. Cannot be merged since goto on c will lead to two different sets.</p>	
<p>Consider a 6-stage instruction pipeline, where all stages are perfectly balanced. Assume that there is no cycle-time overhead of pipelining. When an application is executing on this 6-stage pipeline, the speedup achieved with respect to non-pipelined execution if 25% of the instructions incur 2 pipeline stall cycles is</p>	<p>1.</p> <p>1</p> <p>2.</p> <p>2</p> <p><b>3.</b></p> <p><b>4</b></p> <p>4.5</p>
<p>Which of these contains an executable statement?</p>	<p>1.// var a = 0; // var b = 0; 2./* var a = 0; // var b = 0; */ <b>3./* var a = 0; */ var b = 0;</b> 4.// var a = 0; /* var b = 0; */</p>

_____ scheduler selects the jobs from the pool of jobs and loads into the ready queue.	1. <b>Long term</b> 2. Short term 3. Medium term 4. None of these
Automaton accepting the regular expression of any number of a ' s is:	1. <b>a*</b> 2. a
	3. a*b* 4. abc
The minimum number of page frames that must be allocated to a running process in a virtual memory environment is determined by	1. <b>the instruction set architecture</b> 2. page size 3. physical memory size 4. number of processes in memory

Finite automata recognizes -----grammars	<p>1.</p> <p>type-1</p> <p>2.</p> <p><b>type-3</b></p> <p>3. type-0</p> <p>4.</p> <p>type-2</p>
The main difference between JK and RS flip-flop is that?	<p>1.</p> <p>JK flip-flop does not need a clock pulse</p> <p>2. there is feedback in JK flip-flop</p> <p>3.</p>
	<p><b>JK flip-flop accepts both inputs as 1</b></p> <p>4.</p> <p>JK flip-flop is acronym of junction cathode multivibrator</p>
Radix of binary number system is ____?	<p>1.</p> <p>0</p> <p>2.</p> <p>1</p> <p><b>3.</b></p> <p><b>2</b></p> <p>4.</p> <p>A&amp;B</p>

Which of the following is minimum error code?	<p>1. Octal code</p> <p><b>2. Grey code</b></p> <p>3. Binary code</p> <p>4. Excess 3 code</p>
When used with an IC, what does the term "QUAD" indicate?	<p><b>1. 4 circuits</b></p> <p>2. 2 circuits</p> <p>3. 8 circuits</p> <p>4. 6 circuits</p>
_____ register keeps tracks of the instructions stored in program stored in memory.	<p>1. AR (Address Register)</p> <p>2. XR (Index Register)</p> <p>3. <b>PC (Program Counter)</b></p> <p>4. AC (Accumulator)</p>

<p>The language is <math>L = \{0^p 1^q 0^r \mid p, q, r \geq 0, p \neq r\}</math> is</p>	<ol style="list-style-type: none"> <li>1. Context-sensitive but not context-free</li> <li>2. Recursive but not Context-free</li> <li>3. Regular</li> <li>4. <b>Context-free</b></li> </ol>
<p>Write Through technique is used in which memory for updating the data ____.</p>	<ol style="list-style-type: none"> <li>1. Virtual memory</li> <li>2. Main memory</li> <li>3. Auxiliary memory</li> <li>4. <b>Cache memory</b></li> </ol>
<p>Which of the following is not hardware:</p>	<ol style="list-style-type: none"> <li>1. Magnetic tape</li> <li>2. Printer</li> <li>3. VDU terminal</li> <li>4. <b>Assembler</b></li> </ol>

Multiple choice examination answer sheets can be evaluated automatically by	1. <b>Optical Mark Reader</b> 2. Optical Character Reader 3. Magnetic tape reader 4. Magnetic ink character reader.
Which of the following would cause quickest access	1. direct access from a magnetic tape 2. <b>direct access from a hard disk</b> 3. direct access from a floppy disk 4. direct access from a cassette tape
The process of retaining data for future use is called	1. reading 2. writing <b>3. storing</b> 4.
	coding



Magnetic tapes are good storage media for	1. backup and low volume data  2. <b>backup and high volume data</b>  3. storing original but low volume data  4. storing original but high volume data
What characteristic of RAM memory makes it not suitable for permanent storage?	1. too slow  2. unreliable  3. <b>it is volatile</b>  4. too bulky
The average time required to reach a storage location in memory and obtain its contents is called the	1. seek time  2. turnaround time  3. <b>access time</b>  4. transfer time
Which of the following is lowest in memory hierarchy?	1.

	<p>Cache memory</p> <p>2.</p> <p>Secondary memory</p> <p>3.</p> <p><b>Registers</b></p> <p>4.</p> <p>RAM</p>
One operation that is not given by magnitude comparator	<p>1.</p> <p>equal</p> <p>2. <b>less</b></p> <p>3. greater</p> <p>4.</p> <p>addition</p>
An unambiguous grammar has	<p>1. <b>Exactly one leftmost derivation for a string w</b></p> <p>2. At most one leftmost and one rightmost derivation for a string w</p> <p>3. At most one rightmost derivation for a string w</p> <p>4. Exactly one leftmost and rightmost derivation for a string w</p>
A stack organized computer has	<p>1. Three-address Instruction</p>

	<p>2. Two-address Instruction</p> <p>3. One-address Instruction</p> <p><b>4. Zero-address Instruction</b></p>
Which directory implementation is used in most of the Operating Systems?	<p>1. Single level directory structure</p> <p>2. Two level directory structure</p> <p>3. <b>Tree directory structure</b></p> <p>4. Acyclic directory structure</p>
The memory unit that communicates directly with the CPU is called the	<p>1. <b>main memory</b></p> <p>2. Secondary memory</p> <p>3. shared memory</p> <p>4. auxiliary memory</p>
In which addressing mode the operand is given explicitly in the instruction	<p>1. Absolute</p> <p>2. <b>Immediate</b></p> <p>3. Indirect</p>

	<p>4.</p> <p>Direct</p>
Resource locking _____.	<p>1.</p> <p>Allows multiple tasks to simultaneously use resource</p> <p>2.</p> <p><b>Forces only one task to use any resource at any time</b></p> <p>3.</p> <p>Can easily cause a dead lock condition</p> <p>4.</p> <p>Is not used for disk drives</p>
The load instruction is mostly used to designate a transfer from memory to a processor register known as ____.	<p>1.</p> <p><b>Accumulator</b></p> <p>2.</p> <p>Instruction Register</p> <p>3.</p> <p>Program counter</p> <p>4.</p> <p>Memory address Register</p>
A group of bits that tell the computer to perform a specific operation is known as ____.	<p>1.</p> <p><b>Instruction code</b></p> <p>2.</p> <p>Micro-operation</p> <p>3.</p> <p>Accumulator</p> <p>4.</p> <p>Register</p>

Memory unit accessed by content is called_____	1.
	Read only memory
	2.
	Programmable Memory
	3.
	Virtual Memory
	4.
	<b>Associative Memory</b>
PSW is saved in stack when there is a _____.	1. <b>interrupt recognized</b>
	2. execution of RST instruction
	3.
	Execution of CALL instruction
	4.
	All of these
In a connected graph, a bridge is an edge whose removal disconnects a graph. Which one of the following statements is true?	1.
	A tree has no bridges
	2.
	A bridge cannot be part of a simple cycle
	3.
	Every edge of a clique with size 3 is a bridge (A clique is any complete sub graph of a graph)
	4.
	<b>A graph with bridges cannot have a cycle</b>

Software coupling is a sign of poor architectural design and can always be avoided in every system.	<p>1. True</p> <p>2. <b>False</b></p>
	3. 4.
Generally Dynamic RAM is used as main memory in a computer system as it_____.	<p>1. Consumes less power</p> <p>2. <b>has higher speed</b></p> <p>3. has lower cell density</p> <p>4. needs refreshing circuitry</p>
Cache memory acts between_____.	<p>1. <b>CPU and RAM</b></p> <p>2. RAM and ROM</p> <p>3. CPU and Hard Disk</p> <p>4. None of these</p>

Which of the following is not the attribute of FCB?	<ol style="list-style-type: none"> <li>1. File permissions</li> <li>2. Program Counter</li> <li>3. Access Control List</li> <li>4. <b>Pointers to file control blocks</b></li> </ol>
ALE stands for _____	<ol style="list-style-type: none"> <li>1. <b>address latch enable</b></li> <li>2. address level enable</li> <li>3. address leak enable</li> <li>4. address leak extension</li> </ol>
Which model depicts the profile of the end users of a computer system?	<ol style="list-style-type: none"> <li>1. design model</li> <li>2. implementation model</li> <li>3. <b>user model</b></li> <li>4. client model</li> </ol>

<p>Given an arbitrary non-deterministic finite automaton (NFA). with N states, the maximum number of states in an equivalent minimized DFA is at least.</p>	<ol style="list-style-type: none"> <li>1. <math>N^2</math></li> <li>2. <math>2N</math></li> <li>3. <b><math>2^N</math></b></li> <li>4. <math>N!</math></li> </ol>
<p>In 8086, Example for Non maskable interrupts are _____.</p>	<ol style="list-style-type: none"> <li>1. <b>TRAP</b></li> <li>2. RST6.5</li> <li>3. INTR</li> <li>4. RST6.6</li> </ol>
<p>Address line for TRAP is?</p>	<ol style="list-style-type: none"> <li>1. 0023H</li> <li>2. <b>0024H</b></li> <li>3. 0033H</li> <li>4. 0099H</li> </ol>



Access time is faster for _____.	1. ROM 2. <b>SRAM</b> 3. DRAM 4. ERAM
Which of these framework activities is not normally associated with the user interface design processes?	1. cost estimation 2. interface construction 3. <b>interface validation</b> 4. user and task analysis
Which method bypasses the CPU for certain types of data transfer?	1. Software interrupts 2. Interrupt-driven I/O 3. Polled I/O 4. <b>Direct memory access (DMA)</b>

A 20-bit address bus can locate _____.	<p>1. 1,048,576 locations</p> <p>2. 2,097,152 locations</p> <p>3. 4,194,304 locations</p> <p>4. 8,388,608 locations</p>
In a DMA write operation the data is transferred	<p>1. from I/O to memory</p> <p>2. from memory to I/O</p> <p>3. from memory to I/O</p> <p>4. from I/O to I/O</p>
Direction flag is used with	<p>1. String instructions</p> <p>2. Stack instructions.</p>
	<p>3. Arithmetic instructions</p> <p>4. Branch instructions</p>

EPROM is generally erased by using	1. <b>Ultraviolet rays</b> 2. infrared rays 3. 12 V electrical pulse 4. 24 V electrical pulse
Which is used to store critical pieces of data during subroutines and interrupts	<b>1. Stack</b> 2. Queue 3. Accumulator 4. Data register
Usability questionnaires are most meaningful to the interface designers when completed by	1. customers 2. experienced programmers 3. <b>product users</b> 4. project managers

An optimizing compiler	<ol style="list-style-type: none"> <li>1. Is optimized to occupy less space</li> <li>2. <b>Optimized the code</b></li> <li>3. Is optimized to take less time for execution</li> <li>4. Secured Code</li> </ol>
The external system bus architecture is created using from _____ architecture	<ol style="list-style-type: none"> <li>1. Pascal</li> <li>2. Dennis Ritchie</li> <li>3. Charles Babbage</li> <li>4. <b>Von Neumann</b></li> </ol>
Most software continues to be custom built because	<ol style="list-style-type: none"> <li>1. Component reuse is common in the software world.</li> <li>2. Reusable components are too expensive to use.</li> <li>3. Software is easier to build without using someone else's components</li> <li>4. <b>Off-the-shelf software components are unavailable in many application domains.</b></li> </ol>
A binary tree in which if all its levels except possibly the last, have the maximum number of nodes and all the nodes at the last level appear as far left as possible, is known as	<ol style="list-style-type: none"> <li>1. <b>full binary tree</b></li> <li>2. AVL tree</li> <li>3.</li> </ol>

	<p>threaded tree</p> <p>4.</p> <p>complete binary tree</p>
<p>Class testing of object-oriented software is equivalent to unit testing for traditional software.</p>	<p>1. true</p> <p>2.</p> <p>false</p> <p>3. 4.</p>
<p>Performance testing is only important for real-time or embedded systems.</p>	<p>1. true</p> <p>2.</p> <p>false</p> <p>3. 4.</p>
<p>Which statement does not require semicolon?</p>	<p>1. goto xyz</p> <p>2.</p> <p>int x = 20</p> <p>3.</p> <p>#define MAX 100</p> <p>4.</p> <p>do {... }while(count&lt;=100)</p>
<p>Stress testing examines the pressures placed on the user during system use in extreme environments</p>	<p>1. true</p> <p>2.</p> <p>false</p> <p>3. 4.</p>
<p>Program flow graphs are identical to program flowcharts.</p>	<p>1.</p> <p>true</p>

	<p>2.</p> <p>false</p> <p>3. 4.</p>
<p>When testing object-oriented software it is important to</p> <p>test each class operation separately as part of the unit testing process.</p>	<p>1. true</p> <p>2.</p> <p>false</p> <p>3. 4.</p>
<p>If L and L' are recursively enumerable, then L is</p>	<p>1. regular</p> <p>2. context-free</p> <p>3. context-sensitive</p> <p>4.</p> <p>recursive</p>
<p>Let L1 be a recursive language, and let L2 be a recursively enumerable but not a recursive language. Which one of the following is TRUE?</p> <p>L1' --&gt; Complement of L1</p> <p>L2' --&gt; Complement of L2</p>	<p>1. L1' is recursive and L2' is recursively enumerable</p> <p>2.</p> <p>L1' is recursive and L2' is not recursively enumerable</p> <p>3.</p> <p>L1' and L2' are recursively enumerable</p> <p>4.</p> <p>L1' is recursively enumerable and L2' is recursive</p>

Which of the following is true?	<p>1.</p> <p><b>The complement of a recursive language is recursive.</b></p>
	<p>2.</p> <p>The complement of a recursively enumerable language is recursively enumerable</p> <p>3.</p> <p>The complement of a recursive language is either recursive or recursively enumerable</p> <p>4.</p> <p>The complement of a contextfree language is context-free</p>
Boolean algebra is also called	<p>1.</p> <p><b>switching algebra</b></p> <p>2.</p> <p>arithmetic algebra</p> <p>3.</p> <p>linear algebra</p> <p>4.</p> <p>algebra</p>
A quadruple is a record structure with _____ fields.	<p>1. 3</p> <p><b>2. 4</b></p> <p>3. 1</p> <p>4. 2</p>

<p>In the types of Three-Address statements, copy statements of the form <math>x := y</math> means</p>	<ol style="list-style-type: none"> <li>1. The value of x is assigned to y or the value of y is assigned to x.</li> <li>2. The value of x is assigned to y and the value of y is assigned to x.</li> <li>3. <b>The value of y is assigned to x.</b></li> </ol>
	<ol style="list-style-type: none"> <li>4. The value of x is assigned to y.</li> </ol>
<p>The set of all strings over the alphabet {a,b} (including epsilon) is denoted by</p>	<ol style="list-style-type: none"> <li>1. <math>(a+b)^+</math></li> <li>2. <math>a^+b^+</math></li> <li>3. <math>a^*b^*</math></li> <li>4. <b><math>(a+b)^*</math></b></li> </ol>
<p>Which one of the following languages over alphabet {0,1} is described by the regular expression: <math>(0+1)^*0(0+1)^*0(0+1)^*?</math></p>	<ol style="list-style-type: none"> <li>1. <b>The set of all strings containing at least two 0's</b></li> <li>2. The set of all strings that begin and end with either 0 or 1.</li> <li>3. The set of all strings containing at most two 0's.</li> <li>4. The set of all strings containing the substring 00.</li> </ol>



<p>The focus of validation testing is to uncover places that a user will be able to observe failure of the software to conform to its requirements.</p>	<p>1. true</p> <p>2. false</p> <p>3. 4.</p>
<p>How many DFAs exist with two state over the input alphabet (a,b)</p>	<p>1. 16</p> <p>2. 26</p> <p>3. 32</p> <p>4. 64</p>
<p>Which one of the following regular expressions over {0,1} denotes the set of all strings not containing 100 as a substring?</p>	<p>1. <math>0^*(11^*0)^*</math></p> <p>2. <math>0^*1^*01</math></p> <p>3. <math>0^*(10+1)^*</math></p> <p>4. <math>0^*1010^*</math></p>

Software validation is achieved through a series of tests performed by the user once the software is deployed in his or her work environment.	1. true 2. <b>false</b> 3. 4.
Consider a schedule S1 given below;  R1(A); W1(A); R2(B); R2(A); R1(B); W2(A+B); W1(B); where R1 and W1 are read and write operations of transaction T1	1. S1 is a serializable schedule 2.
and R2 and W2 are read and write operations of transaction T2.  Which of the following is correct regarding schedule S1?	A deadlock will occur if 2PL is used 3. S1 is a conflict serializable schedule 4. <b>S1 is a view serializable schedule</b>
Which of the following operation is used if we are interested in only certain columns of a table?	1. <b>PROJECTION</b> 2. SELECTION 3. UNION 4. JOIN
Divide and conquer mechanism is used in	1.selection sort 2.merge sort <b>3.quick and merge sorts</b> 4.indexed sequential search
To Delete an item from a Queue identify the correct set of statements	1.Q[REAR] = item; REAR ++ <b>2.item = Q[FRONT]; FRONT++</b> 3.item = Q[REAR]; FRONT ++ 4.item = Q[FRONT]; REAR ++

<p>If there are n relations how many number of join conditions has to be applied to retrieve the data from all the n relations?</p>	<p>1. N+1</p> <p>2. N</p> <p>3. N-1</p> <p>4. A Number in the range 0 toN.</p>
<p>In access lists and groups which one of the following is correct for the 'RWX' notation of the order 'group, owner, public'</p>	<p>1. 111110001</p> <p>2. 110111001</p> <p>3. 001111110</p> <p>4. 001110111</p>
<p>Which of the following statement is false?</p>	<p>1. If there is a PDA by acceptance state that accept L, then there is also a PDA by empty stack that accept L</p> <p>2. If there is a NPDA that accept L, then there is also a DPDA that accept L.</p> <p>3. If there is a PDA by empty stack, then there is also a CFG G that accept L.</p> <p>4. If there is a CFG G that accepts L, then there is also a PDA that accept L.</p>

Mode of communication in which transmission takes place in both directions, but only in one direction at a time is called_____	1.simplex 2.four wired 3.full duplex 4.halfduplex
Which of the following statements is true?	1.Quadraples have some disadvantages over triples notation for an optimizing compiler 2. <b>For optimizing compiler, moving a statement that defines a temporary value requires us to change all references to that statements. It is an overhead for triples notation</b> 3.For optimizing compiler, triples notation has important benefit where statements are often moved around as it incurs no movements or change 4.All the statements are false
The addressing mode used in an instruction of the form ADD R1, R2 is _____.	1. Absolute  2.
	Indirect <b>3. Index</b>  4. Register
A binary tree T has 20 leaves. The number of nodes in T having two children is	1. 34  2. 99  3. 7 <b>4. 19</b>

Which of the following asymptotic notation is the worst among all?	<p>1. <math>n + 9378</math></p> <p>2. <math>2^{n-1}</math></p> <p>3. <math>2^n - 1</math></p> <p>4. <math>2n + 1</math></p>
When there is complete DFA with Five states out of which two are final states if F is modified such that it recognizes complement of the original language then there will be at least _____ final states.	<p>1. 3</p> <p>2. 2</p> <p>3. 5</p> <p>4. 7</p>
How many address bits are needed to select all memory locations in the $16K \times 1$ RAM?	<p>1. 8</p> <p>2. 10</p> <p>3. 14</p> <p>4. 16</p>
Bit stuffing refers to	<p>1. inserting a '0' in user data stream to differentiate it with a flag</p> <p>2. inserting a '0' in flag data stream to avoid ambiguity</p> <p>3. appending a nibble to the flag sequence</p> <p>4. appending a nibble to the user data stream</p>

Which one of these is characteristic of RAID 5?	1. <b>Distributed parity</b> 2. No Parity 3. All parity in a single disk 4. Double Parity
The set of fundamental assumptions about what products the organization should produce, how and where it should produce them, and for whom they should be produced is	1. <b>organizational culture.</b> 2. behavioral model. 3. rational model. 4. agency theory.
The set of fundamental assumptions about what products the organization should produce, how and where it should produce them, and for whom they should be produced is	1. <b>organizational culture.</b> 2. behavioral model. 3. rational model. 4. agency theory.
A network that contains multiple hubs is most likely configured in which topology?	1.Mesh <b>2.Tree</b> 3.Bus 4.Star
Which one of the following models is not suitable for accommodating any change?	1. Build & Fix Model 2. RAD Model <b>3. Waterfall Model</b> 4. Prototyping Model

Content of the program counter is added to the address part of the instruction in order to obtain the effective address is called	<ol style="list-style-type: none"> <li>1. <b>relative address mode.</b></li> <li>2. index addressing mode.</li> <li>3. register mode</li> <li>4. implied mode</li> </ol>
The three key levels at which responsibility can be defined is at the ____,_____,____	<ol style="list-style-type: none"> <li>1. Team, Organization, contractor</li> <li>2. Project, Strategic, Activity</li> <li>3. Project, Activity, WBS</li> <li>4. <b>Project, Organization, Team</b></li> </ol>
Usecase analysis focuses upon	<ol style="list-style-type: none"> <li>1. <b>Actors</b></li> <li>2. Objects</li> <li>3. Data</li> <li>4. Entities</li> </ol>
The data-in register of I/O port is	<ol style="list-style-type: none"> <li>1. <b>read by host to get input</b></li> <li>2. read by controller to get input</li> <li>3. written by host to send output</li> <li>4. written by host to start a command</li> </ol>

Which one of the following is a valid project Key Performance Indicator (KPI)?	1. Master schedule. 2. Staff appraisals. 3. Management buy in. 4. <b>Milestone achievement.</b>
If M1 machine recognizing L with n states, then M2 recognizing L* constructed Using Thompson construction will have ----- states.	1. n+2 2. <b>n+1</b> 3. n 4. n-1
Which one of the following uses 8B/6T encoding scheme	1.100 Base-T1 <b>2.100 Base-T4</b> 3.100 Base TX 4.100 Base-FX
A packet switching network	1.can reduce the cost of using an information utility 2.allows communications channel to be shared among more than one user <b>3.can reduce the cost of using an information utility and allows communications channel to be shared among more than one user</b> 4.is free
The main purpose of a data link content monitor is to	<b>1.detect problems in protocols</b> 2.determine the type of switch used in a data link 3.determine the flow of data 4.determine the type of switching used in data link
Which of the following is a wrong example of network layer	<b>1.X.25 level 2-ISO</b> 2.Source routing and Domains Naming Usenet 3.X.25 packet land protocols (PLP-ISO) 4.Internet protocol (I/P) ARPA NET
Logical addressing is used in _____ layer	1. <b>Network</b> 2.Transport 3.Physical 4.Session
_____ functions as a request-response protocol in the client-server computing model.	<b>1.HTTP</b> 2.IP 3.TCP 4.UDP



In context of OSI or TCP/IP computer network models, which of the following is false?	1. Major difference between LAN and WAN is that the later uses switching element <b>2. Network layer is connection oriented</b> 3. A repeater is used just to forward bits from one network to another one 4. A gateway is used to connect incompatible networks
All devices/host connect to a central switch in _____ topology.	<b>1. Star</b> 2. Ring 3. Bus 4. Tree
Calculate the person months for a project that was completed in two months with two people working on it.	1. 2 <b>2. 4</b> 3. 1 4. 8
When FA M is given which recognizes language L and reverse of L is found by using M then there can be _____ Final states	1. Two  2. Three  3. <b>Only one</b>  4. Any number
Who owns the Project Management Plan (PMP)?	1. The project team. 2. The chief executive. <b>3. The project manager.</b> 4. The project support office.

<p>The number of states in a machine M recognizing L1UL2 will be _____ where n is the number of states in M1 and m is the number of states in M2 .</p>	<p>1. m-n</p> <p>2. <b>m+n</b></p> <p>3. m+n+1</p> <p>4. n-m</p>
<p>A Program Counter contains a number 825 and address part of the instruction contains the number 24. The effective address in the relative address mode, when an instruction is read from the memory is</p>	<p>1. 849</p> <p>2. <b>850</b></p> <p>3. 801</p> <p>4. 802</p>
<p>How many two state FA can be drawn over alphabet{0,1} which accepts(0+1)*</p>	<p>1. 12</p>

	<p>2.</p> <p>14</p> <p>3.</p> <p>20</p> <p>4. 15</p>
When there is more than one final state in the reduced FA, then its regular expression will contain _____ operator surely	<p>1. dot</p> <p>2. binary +</p> <p>3. star</p> <p>4. unary +</p>
When an instruction is read from the memory, it is called	<p>1.</p> <p>Memory Read cycle</p> <p>2.</p> <p>Fetch cycle</p> <p>3.</p> <p>Instruction cycle</p> <p>4.</p> <p>Memory write cycle</p>
A data structure where elements can be added or removed at either end but not in the middle	<p>1. linked lists 2. Stacks 3. Queues 4. Deque</p>
The Epsilon-Closure of any state q will contain the state _____ irrespective of q.	<p>1. p</p> <p>2. Epsilon</p> <p>3. q</p> <p>4. Final State</p>
The minimum length for strings in the regular expression ( $10^* + 001^*$ ) <sup>*</sup> is _____	<p>1. Infinite</p> <p>2. One</p> <p>3. Zero</p>

	4. Two
A variable P is called pointer if	1. <b>P contains the address of an element in DATA</b> 2. P contain the DATA and the address of DATA 3. P can store only memory addresses 4. P points to the address of first element in DATA
Which of the following regular expression denotes a language comprising of all possible strings over {a,b} of length n where n is a multiple of 3?	1. (aaa+ab+a)+(bbb+bb+a) 2. <b>((a+b) (a+b) (a+b))*</b> 3. (aaa+bbb)* 4. (a+b+aa+bb+aba+bba)*
Let G(x) be the generator polynomial used for CRC checking. What is the condition that should be satisfied by G(x) to detect odd number of bits in error?	1. G(x) contains more than two terms 2. G(x) does not divide $1+x^k$ , for any k not exceeding the frame length 3. <b><math>1+x</math> is a factor of G(x)</b> 4. G(x) has an odd number of terms.
What is the data structures used to perform recursion?	1.list 2.queue <b>3.stack</b> 4.Tree
The restriction while using the binary search is ?	1.List should be small in number 2.List should be large in number 3. <b>List should be sorted</b> 4.No restriction

Which Data structure is best suited for the UNDO operation in Windows	1. Both Stack and Queues 2. Queues 3. <b>Stack</b> 4. Arrays
Which of the following logic expression is incorrect?	1. $1 \oplus 0 = 1$  2. <b><math>1 \oplus 1 \oplus 0 = 1</math></b>  3. $1 \oplus 1 \oplus 1 = 1$  4. $1 \oplus 1 = 0$
Effective software project management focuses on four P's which are	1. <b>people, product, process, project</b> 2. people, product, performance, process 3. people, performance, payoff, product 4. people, process, payoff, product
The difference between linear array and a record is	1. A record forms a hierarchical structure but a linear array does not 2. All of above 3. <b>An array is suitable for homogeneous data but the data items in a record may have different data type</b> 4. In a record, there may not be a natural ordering in opposed to linear array

Consider the regular language $L = (111 + 11111)^*$ . The minimum number of states in any DFA accepting the language is	1. 3  2. 5  3. 8
	4. 9
The postfix expression for $* + a b - c d$ is?	1.ab + cd - * 2.ab + cd * - 3.ab + - cd * 4.ab cd + - *
What is the recommended distribution of effort for a software project?	1. 50-20-30 2. 50-30-20 3. 30-40-30 4. 40-20-40
Which of the following algorithm design technique is used in the quick sort algorithm?	1.Greedy method 2.Backtracking 3.Divide and conquer 4.Dynamic programming
State the acronym of POMA in software project management	1. Project Organization Monitoring Adopting 2. Planning Organizing Monitoring Adjusting 3. project oriented maintenance and administration 4. Project Orientation Mapping Adjusting
You have to sort a list L consisting of a sorted list followed by a few "random" elements.Which of the following sorting methods would be especially suitable for such a task?	1.Bubble sort 2.Selection sort 3.Quick sort 4.Insertion sort

<p>Which one of the following connects high-speed highbandwidth device to memory subsystem and CPU.</p>	<ol style="list-style-type: none"> <li>1. <b>expansion bus</b></li> <li>2. PCI bus</li> <li>3. SCSI bus</li> <li>4. none of the mentioned</li> </ol>
<p>Which one of the following statements best defines the purpose of a Product Breakdown Structure (PBS)?</p>	<ol style="list-style-type: none"> <li>1. To identify the health and safety strategies and procedures to be used on the project</li> <li>2. To establish the extent of work required prior to project commissioning and the handover</li> <li>3. To define how the products are produced by identifying derivations and dependencies</li> <li>4. <b>To define the hierarchy of deliverables that are required to be produced on the project</b></li> </ol>
<p>Simplified form of the boolean expression <math>(X + Y + Z) + Y + XY (X + Z)</math> is</p>	<ol style="list-style-type: none"> <li>1. <math>X + Y + Z</math></li> <li>2. <math>XY + YZ</math></li> <li>3. <b><math>X + YZ</math></b></li> <li>4. <math>XZ + Y</math></li> </ol>

Specify the 2 library functions to dynamically allocate memory?	<p>1. <b>malloc() and calloc()</b></p> <p>2. malloc() and memalloc()</p> <p>3. alloc() and memalloc()</p> <p>4. memalloc() and faralloc()</p>
During a software development project two similar requirements defects were detected. One was detected in the requirements phase, and the other during the implementation phase. Which of the following statements is mostly likely to be true?	<p>1. There is no relationship between the phase in which a defect is discovered and its repair cost. .</p> <p>2. <b>The most expensive defect to correct is the one detected during the implementation phase.</b></p> <p>3. The most expensive defect to correct is the one detected during the requirements phase.</p> <p>4. The cost of fixing either defect will usually be similar.</p>
An unambiguous grammar has	<p>1. <b>Exactly one leftmost derivation for a string w</b></p> <p>2. At most one leftmost and one rightmost derivation for a string w</p> <p>3. At most one rightmost derivation for a string w</p> <p>4. Exactly one leftmost and rightmost derivation for a string w</p>
In general tree to binary tree conversion, the two links of the binary tree node points to	<p>1.two leaf nodes in the general tree 2.its right child and sibling in the gen ral tree 3.its left child and sibling in the general tree <b>4.its left and right child in the general tree</b></p>



<p>A property which is not true for classes is that they</p>	<ol style="list-style-type: none"> <li>1. Can closely model objects in the real world.</li> <li>2. <b>bring together all aspects of an entity in one place.</b></li> <li>3. permit data to be hidden from other classes.</li> <li>4. are removed from memory when not in use.</li> </ol>
<p>In C++, dynamic memory allocation is achieved with the operator _____</p>	<ol style="list-style-type: none"> <li>1. malloc()</li> <li>2. delete</li> <li>3. <b>new</b></li> <li>4. this</li> </ol>
<p>Which of the following statements about queues is incorrect?</p>	<ol style="list-style-type: none"> <li>1. Queues are first-in, first-out (FIFO) data structures</li> <li>2. Queues can be implemented using arrays</li> <li>3. Queues can be implemented using linked lists</li> <li>4. <b>New nodes can only be added at the front of the queue</b></li> </ol>
<p>Which of the following statements is/are <b>FALSE</b>?</p>	<ol style="list-style-type: none"> <li>1. <b>Turing recognizable languages are closed under union and complementation.</b></li> <li>2. <b>Turing decidable languages are closed under intersection and complementation</b></li> <li>3. <b>Turing recognizable languages are closed under union and intersection.</b></li> <li>4. <b>For every non-deterministic Turing machine, there exists an equivalent deterministic Turing machine.</b></li> </ol>
<p>If you have an empty queue and you insert characters 'r', 'a', 't' (in this order only), what is the order of the characters when you dequeue all the elements?</p>	<p>1. <b>'r', 'a', 't'</b> 2. 't', 'a', 'r' 3. 'r', 't', 'a' 4. 't', 'r', 'a'</p>

Which two RAID types use parity for data protection?	1. RAID 1 2. RAID 4 3. RAID 1+0 4. <b>RAID 5</b>
Which of the following conversion is not possible (algorithmically)?	1. <b>nondeterministic PDA to deterministic PDA</b> 2. nondeterministic FSA to deterministic FSA 3. regular grammar to context-free grammar 4. nondeterministic TM to deterministic TM
The minimum number of arithmetic operations required to evaluate the polynomial $P(X)=X^5+4X^3+6X+5$ for a given value of X using only one temporary variable.	1. 6 <b>2. 7</b> 3. 8 4. 9
Write the regular expression to denote the language L over $\Sigma = \{a, b\}$ such that all the string do not contain the substring "ab".	1. $a^*b^*$ 2. <b><math>b^*a^*</math></b> 3. $(ab)^*$ 4. $(ba)^*$
How many nodes in a tree have no ancestors.	1. 2 2. n <b>3. 1</b> 4. 0

Which of the following regular expression identities are true?	1. $r^* s^* = r^* + s^*$ 2. $(r + s)^* = (r^* s^*)^*$ 3. $(r + s)^* = r^* + s^*$ 4. $(r + s)^* = r^* s^*$
The number of components in a graph with n nodes and 1 edge are	1.n 2.n-2 3.n-1 4.n-3
The number of components in a graph with n nodes and 1 edge are	1.n 2.n-2 3.n-1 4.n-3
Consider two strings A = 'qpqrr' and B = 'pqprrp'. Let x be the length of the LCS between A and B and let y be the number of such longest common subsequences between A and B. Then x + 10y =	1.42 2.34 3.32 4.30
A grammar that produces more than one parse tree for some sentence is called	1.Ambiguous 2.Irregular 3.Regular 4.Unambiguous
Pee hole optimization	1.Local optimization 2.Loop optimization 3.Constant folding 4.Data flow analysis
Using linked list node representation, inserting a node in general tree is performed effciently	1 .not possible 2.by merging with an existing node 3.after introducing a new link 4.after converting to binary tree

<p>The 16-bit 2's complement representation of an integer is 1111 1111 1111 0101, its decimal representation is</p>	<p>1.</p> <p>1</p> <p>2.</p> <p>2</p> <p>3.</p> <p>3</p> <p>4.</p> <p><b>-11</b></p>
<p>The cyclomatic complexity metric provides the designer with information regarding the number of</p>	<p>1. cycles in the program</p> <p>2. errors in the program</p> <p>3. independent logic paths in the program</p> <p>4.</p> <p><b>statements in the program</b></p>
<p>In operator precedence parsing , precedence relations are defoned</p>	<p>1.To delimit the handle 2.For all pair of terminals <b>3.For all pair of non terminals</b> 4.Only for a certain pair of terminals</p>
<p>If the associativity of a processor cache is doubled while keeping the capacity and block size unchanged, which one of the following is guaranteed to be NOT affected?</p>	<p>1.</p> <p>Width of tag comparator</p> <p>2.</p> <p>Width of set index decoder</p> <p>3.</p> <p>Width of way selection multiplexer</p> <p>4.</p>
	<p><b>Width of processor to main memory data bus</b></p>

An intermediate code form is	1.Postfix notation 2.Syntax trees 3.Three address code <b>4.Postfix notation, Syntax trees and Three address code</b>
Relocating bits used by relocating loader are specified by	1.Relocating loader itself <b>2.Linker</b> 3.Assembler 4.Macro processor
The tightest upper bound for the worst case performance of quicksort implemented on an array of n elements by always choosing the pivot as the central element is	1. $T(n! \log n)$ 2. $O(n \log n)$ <b>3.<math>O(n^2)</math></b> 4. $O(n^3)$
Synthesized attribute can be easily simulated by a	<b>1.LR grammar</b> 2.Ambiguous grammar 3.LL grammar 4.LF grammar
Any code inside a loop that always computes the same value can be moved before the loop. This is called	1. <b>Loop invariant computation</b> 2.Interchange of statements 3.induction variable 4.Algebraic Transformation
which of the following intermediate language can be used in intermediate code generation?	<b>1.Postfix notation and Three address code</b> 2.Quadruples 3.Triples 4.Infix notation and two address code
Postorder Tree traversal is recursive	1.LDR <b>2.LRD</b> 3.DLR 4.DRL
In the context of abstract-syntax-tree (AST) and controlflow-graph (CFG), which one of the following is True?	1.In both AST and CFG, let node N2 be the successor of node N1. In the input program, the code corresponding to N2 is present after the code corresponding to N1 2.For any input program, neither AST nor CFG will contain a cycle 3.Each node in AST and CFG corresponds to at most one statement in the input program <b>4.The maximum number of successors of a node in an AST and a CFG depends on the input program</b>
In an array representation of binary tree, the left child of i th node is located at	1. $2i+2$ 2. $(i-1)/2$ 3. $(i-2)/2$ <b>4.<math>2i+1</math></b>
Local and loop optimization in turn provide motivation for	1.Peephole optimization 2.DFA and Constant folding 3.Basic Code Analysis <b>4.Data flow analysis</b>
In a syntax directed translation schema ,if value of an attribute of a node is function of	1.Inherited attributes <b>2.Synthesized attributes</b> 3.Canonical attributes 4.Derived attributes

the values of the attributes of its children , then it is called	
Minterms are arranged in map in a sequence of	1. binary sequence 2. <b>gray code</b> 3. binary variables 4. BCD code
Suppose a circular queue of capacity $(n - 1)$ elements is implemented with an array of $n$ elements. Assume that the insertion and deletion operation are carried out using REAR and FRONT as array index variables, respectively. Initially, REAR = FRONT = 0. The conditions to detect queue full and queue empty are	1.Full: $(\text{FRONT}+1) \bmod n == \text{REAR}$ , empty: $\text{REAR} == \text{FRONT}$ 2.Full: $\text{REAR} == \text{FRONT}$ , empty: $(\text{REAR}+1) \bmod n == \text{FRONT}$ 3.Full: $(\text{REAR}+1) \bmod n == \text{FRONT}$ , empty: $(\text{FRONT}+1) \bmod n == \text{REAR}$ 4.Full: <b><math>(\text{REAR}+1) \bmod n == \text{FRONT}</math></b> , empty: <b><math>\text{REAR} == \text{FRONT}</math></b>
Condition testing is a control structure testing technique where the criteria used to design test cases is that they	1. <b>rely on basis path testing</b> 2. exercise the logical conditions in a program module 3. select test paths based on the locations and uses of variables 4. focus on testing the validity of loop constructs
A friend function to a class A cannot access	1. <b>the data members of the derived class of A.</b>

	<p>2. public data members and member functions.</p> <p>3. private data members and member functions. protected data members and member functions.</p> <p>4.</p>
Which one of the following is the recurrence equation for the worst case time complexity of the Quicksort algorithm for sorting $n \geq 2$ numbers? In the recurrence equations given in the options below, $c$ is a constant.	<p>1. <math>T(n) = 2T(n/2) + cn</math>    2. <math>T(n) = T(n-1) + T(0) + cn</math>    3. <math>T(n) = T(n/2) + cn</math></p> <p>4. <math>T(n) = 2T(n-2) + cn</math></p>
Waterfall model of software development is also termed as	<p>1. <b>The linear sequential model</b></p> <p>2. Fountain model</p> <p>3. Spiral model</p> <p>4. Concurrent development model</p>
Which searching technique is better, if unsorted array is given as input	<p>1. Radix search    2. <b>Linear search</b>    3. Binary search    4. Indexed sequential search</p>
What will be the output of the following code <pre>#include &lt;stdio.h&gt; void main() { int i; int a[3]=5; for (i=2;i&gt;=0;i--) { printf("%d\n",a[i]); } }</pre>	<p>1. 0 0 5</p> <p>2. 5 0 0</p> <p>3. <b>5 garbage garbage</b></p> <p>4. 5 null null</p>
Which of the following tree may have smaller elements in its left subtree and larger element in its right subtree	<p>1. B+ Tree    2. AVL Tree    3. Binary tree    4. <b>Binary search Tree</b></p>

Variables inside parenthesis of functions declarations have _____ level access.	<p>1. Local</p> <p>2. Global</p> <p>3. Module</p> <p>4. Universal</p>
Which of the following statements is/are TRUE for an undirected graph? P: Number of odd degree vertices is even, Q: Sum of degrees of all vertices is even	<p>1. P Only</p> <p>2. Q Only</p> <p>3. Both P and Q</p> <p>4. Neither P nor Q</p>
What is the worst case for Selection sort	<p>1. <math>O(\log n)</math></p> <p>2. <math>O(2n)</math></p> <p>3. <math>O(n)</math></p> <p>4. <math>O(n^2)</math></p>
Consider a software program that is artificially seeded with 100 faults. While testing this program, 159 faults are detected, out of which 75 faults are from those artificially seeded faults. Assuming that both are and seeded faults are of same nature and have same distribution, the estimated number of undetected real fault is	<p>1. 121</p> <p>2. 175</p> <p>3. 432</p> <p>04. 428</p>
System reactions to external events is depicted by	<p>1. State diagram</p> <p>2. Activity diagram</p> <p>3. Usecase diagram</p> <p>4. Sequence diagram</p>
The postfix form of the expression $(A+B)*(C*D-E)*F/G$ is	<p>1. <math>AB + CD*E - *F *G /</math></p> <p>2. <math>AB + CD*E - F **G /</math></p> <p>3. <math>AB+ CD*E - FG /**</math></p> <p>4. <math>AB + CDE * - *F *G /</math></p>
Consider the following array of elements.	



{89,19,50,17,12,15,2,5,7,11,6,9,100}.The minimum number of interchanges needed to convert it into a max-heap is	1.4 2.2 3.5 <b>4.3</b>
Extreme Programming process model includes framework activities such as	1. analysis, design,coding,testing 2. planning,analysis,design,coding
	3. planning,analysis,coding,testing 4. <b>planning, design, coding, testing</b>
Which of the following algorithm is used to find the shortest path between two nodes in graph	1. <b>Dijkstra's algorithm</b> 2.Prim's algorithm 3.Kruskal's algorithm 4.Merge algorithm
Which of the following case does not exist in complexity theory?	1.Average case 2.Worst case 3.Best case 4. <b>Null case</b>
Important capability needed for an agile software developer is	1. Trust 2. Competence 3. <b>Decision-making</b> 4. HardworkKey
Which of the following is the insertion operator?	1. /* 2. // <b>3. &lt;&lt;</b> 4. >>
Given an array that represents elements of arithmetic	

progression in order. It is also given that one element is missing in the progression, the worst case time complexity to find the missing element efficiently is:	1.theta(n) 2.theta(nLogn) <b>3.theta(Logn)</b> 4.theta(1)
Overloading involves writing two or more functions with _____	1.different names and different argument lists 2.different names and the same argument list <b>3.the same name and different argument lists</b> 4.the same name and the same argument list
In which phase is Agile Modeling(AM) carried out	1. Analysis
	2. Coding <b>3. Planning</b> 4. Testing Key
If you assign a default value to any variable in a function prototype's parameter list, then _____	1. all parameters to the left of that variable must have default values <b>2. all parameters to the right of that variable must have default values</b> 3. all other parameters in the function prototype must have default values 4. no other parameters in that prototype can have default values
The operation of processing each element in the list is known as	1.Sorting 2.Merging 3.Inserting <b>4.Traversal</b>
What does the following declaration mean? int (*ptr)[10];	1. ptr is array of pointers to 10 integers <b>2. ptr is a pointer to an array of 10 integers</b> 3. ptr is an array of 10 integers 4. ptr is an pointer to array

Register renaming is done in pipelined processors	<p>1. As an alternative to register allocation at compile time</p> <p>2. For efficient access to function parameters and local variables</p> <p><b>3. To handle certain kinds of hazards</b></p> <p>4. As part of address translation</p>
Which of the following calls a function named displayName, passing it no actual arguments?	<p>1. call displayName</p> <p>2. call displayName ()</p> <p>3. displayName</p> <p>4. <b>displayName()</b></p>
Consider a binary tree T that has 200 leaf nodes. Then, the number of nodes in T that have exactly two children are _____.	<p><b>1.199</b> 2.200 3.Any number between 0 and 199 4.Any number between 100 and 200</p>
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 postorder traversal sequence of the same tree?	<p>1.10,20,15,23,25,35,42,39,30</p> <p>2.15,10,25,23,20,42,35,39,30</p> <p>3.15,20,10,23,25,42,35,39,30</p> <p><b>4.15,10,23,25,20,35,42,39,30</b></p>
If you want to use a class to define objects in many different programs, you should define the class in a C++ _____ file	<p>1. text</p> <p>2. source</p> <p><b>3. header</b></p> <p>4. program</p>

A software requirements specification (SRS) document should avoid discussing which one of the following?	1. <b>User interface issues</b> 2. Non-functional requirements 3. Design specification 4. Interfaces with third party software
How will you free the allocated memory ?	1. delete(var-name); 2. dalloc(var-name); <b>3. free(var-name);</b> 4. remove(var-name);
Binary search algorithm can not be applied to	1.sorted linked list 2.sorted binary trees 3.sorted linear array 4. <b>pointer array</b>
_____ is the 1st step in the testing process	1. Analyze results 2. <b>Plan test</b> 3. Release product 4. Conduct tests
Files whose names end in .h are called _____ files	1. helper <b>2. header</b> 3. handy 4. helping

Overloading involves writing two or more functions with <hr/>	<ol style="list-style-type: none"> <li>1. different names and different argument lists</li> <li>2. different names and the same argument list</li> <li>3. the same name and the same argument list</li> <li>4. <b>the same name and different argument lists</b></li> </ol>
The situation when in a linked list START=NULL is	<ol style="list-style-type: none"> <li>1.overflow</li> <li>2.<b>underflow</b></li> <li>3.housefull</li> <li>4.saturated</li> </ol>
Which of the following is not a Life-critical System?	<ol style="list-style-type: none"> <li>1. Fire Dispatch Systems</li> <li>2. Nuclear Reactors</li> <li>3. Power Utilities</li> <li>4. <b>Inventory Management</b></li> </ol>
Which of the following name does not relate to stacks?	<ol style="list-style-type: none"> <li>1.<b>FIFO lists</b></li> <li>2.LIFO list</li> <li>3.Push-down lists</li> <li>4.Piles</li> </ol>
Two access specifiers in C++ are	<ol style="list-style-type: none"> <li>1. void and free</li> <li>2. <b>public and private</b></li> <li>3. int and double</li> <li>4. formal and informal</li> </ol>
BCD to seven segment is a	<ol style="list-style-type: none"> <li>1. encoder</li> <li>2. carry look ahead</li> <li>3. comparator</li> <li>4. <b>decoder</b></li> </ol>

1. This is a software development process model	1.waterfall model 2. Incremental model 3. Boehm's Spiral model <b>4. all</b>
The degree sequence of a simple graph is the sequence of the degrees of the nodes in the graph in decreasing order. Which of the following sequences can not be the degree sequence of any graph? I. 7, 6, 5, 4, 4, 3, 2, 1 II. 6, 6, 6, 6, 3, 3, 2, 2 III. 7, 6, 6, 4, 4, 3, 2, 2 IV. 8, 7, 7, 6, 4, 2, 1, 1	1.IV only 2.III and IV 3.I and II <b>4.II and IV</b>
The smallest element of an array's index is called its	<b>1.lower bound</b> 2.range D. extract 3.upper bound 4.ion
The space factor when determining the efficiency of algorithm is measured by	1.Counting the average memory needed by the algorithm 2.Counting the minimum memory needed by the algorithm <b>3.Counting the maximum memory needed by the algorithm</b> 4.Counting the maximum disk space needed by the algorithm
The time complexity to build a heap with a list of n numbers is	1.O(n log n) <b>2.O(n)</b> 3.O(log n) 4.O(n <sup>2</sup> )
1. What is the type of software design that defines interfaces between system components?	1. architectural design <b>2. Interface Design</b> 3. component Design 4. database design
Consider the following statements for priority queue :	

<p>S1 : It is a data structure in which the intrinsic ordering of the elements does determine the result of its basic operations.</p> <p>S2 : The elements of a priority queue may be complex structures that are ordered on one or several fields.</p> <p>Which of the following is correct?</p>	<p>1. Both S1 and S2 are incorrect 2.S1 is correct and S2 is incorrect3.Both S1 and S2 are correct <b>4.S1 is incorrect and S2 is correct</b></p>
<p>The library function used to find the last occurrence of a character in a string is</p>	<p>1. strnstr()  <b>2. strrchr()</b>  3. laststr()  4. strstr()</p>
<p>Suppose you want to delete the name that occurs before 'Vellore' in an alphabetical listing. Which of the following data structures shall be most efficient for this operation?</p>	<p>1.Circular linked list <b>2.Dequeue</b> 3.Linked list 4.Doubly linked list</p>
<p>The efficient data structure to insert/delete a number in a stored set of numbers is</p>	<p>1.Queue <b>2.Linked list</b> 3.Doubly linked list 4.Binary tree</p>
<p>What is a type of software design that designs system data structures to be used in a database?</p>	<p>1. architectural design  2. interface Design  3. component Design  <b>4. Database design</b></p>
<p>Prim's algorithm is a method available for finding out the minimum cost of a spanning tree. Its time complexity is given by:</p>	<p>1.O(1) 2.O(n*n) <b>3.O(n logn)</b> 4.O(n)</p>

Which activity most easily lends itself to incremental design?	1. User Interfaces 2. Web Services 3. <b>Enterprise resource planning</b> 4. Embedded Software
The minimum number of NAND gates required to implement the Boolean function. $A + AB' + AB'C$ is equal to	1. <b>Zero</b> 2. 1 3. 4 4. 7
Skewed binary trees can be efficiently represented using	1. Arrays 2. <b>Linked lists</b> 3. Stacks 4. Queues
Acceptance tests are normally conducted by the	1. developer 2. <b>end users</b> 3. test team 4. systems engineers



<p>The best reason for using Independent software test teams is that</p>	<p>1. software developers do not need to do any testing</p> <p><b>2. a test team will test the software more thoroughly</b></p> <p>3. testers do not get involved with the project until testing begins</p> <p>4. arguments between developers and testers are reduced</p>
<p>Consider the data of previous question. Suppose that the sliding window protocol is used with the sender window size of <math>2^i</math> where <math>i</math> is the number of bits identified in the previous question and acknowledgments are always piggybacked. After sending <math>2^i</math> frames, what is the minimum time the sender will have to wait before starting transmission of the next frame? (Identify the closest choice ignoring the frame processing time).</p>	<p>1. 16ms</p> <p>2. 18ms</p> <p><b>3. 20ms</b></p> <p>4. 22ms</p>
<p>A computer system implements 8 kilobyte pages and a +32bit physical address space. Each page table entry contains a valid bit, a dirty bit, three permission bits, and the translation. If the maximum size of the page table of a process is 24 megabytes, the length of the virtual address supported by the system is _____ bits.</p>	<p>1. 33</p> <p>2. 35</p> <p>3. 34</p> <p><b>4. 36</b></p>

<p>What is the normal order of activities in which traditional software testing is organized? a. integration testing b. system testing c. unit testing d.validation testing</p>	<p>1. a, d, c, b</p> <p>2. b, d, a, c</p> <p><b>3. c, a, d, b</b></p> <p>4. d, b, c, a</p>
<p>Consider two processors P1 and P2 executing the same instruction set. Assume that under identical conditions, for the same input, a program running on P2 takes 25% less time but incurs 20% more CPI (clock cycles per instruction) as compared to the program running on P1 If the clock frequency of P1 is 1GHz, then the clock frequency of P2 (in GHz) is</p>	<p>1. 1.5</p> <p><b>2.</b></p> <p><b>1.6</b></p> <p>3. 1.7</p> <p>4. 1.8</p>
<p>A circuit that converts n inputs to <math>2^n</math> outputs is called</p>	<p><b>1.</b></p> <p><b>Encoder</b></p> <p>2. Decoder</p> <p>3. Comparator</p> <p>4. Carry Look Ahead</p>

Which level of RAID refers to disk mirroring with block striping?	<p>1. RAID level 1</p> <p>2. RAID level 2</p> <p>3. RAID level 3</p> <p>4. RAID level 0</p>
	RAID level 3
To build a mod-19 counter the number of flip-flops required is	<p>1. 3</p> <p>2. 5</p> <p>3. 7</p> <p>4. 9</p>
The smallest integer than can be represented by an 8-bit number in 2's complement form is	<p>1. -256</p> <p>2. -128</p> <p>3. -127</p> <p>4. 1</p>

<p>If the associativity of a processor cache is doubled while keeping the capacity and block size unchanged, which one of the following is guaranteed to be NOT affected?</p>	<ol style="list-style-type: none"> <li>1.Width of tag comparator</li> <li>2.Width of set index decoder</li> <li>3.Width of way selection multiplexer</li> <li>4.<b>Width of processor to main memory data bus</b></li> </ol>
<p>The main difference between JK and RS flip-flop is that</p>	<ol style="list-style-type: none"> <li>1. JK flip flop needs a clock pulse</li> </ol>
	<ol style="list-style-type: none"> <li>2. There is a feedback in JK flip-flop</li> <li>3. <b>JK flip-flop accepts both inputs as 1</b></li> <li>4. JK flip-flop is acronym of Junction cathode multi-vibrator</li> </ol>
<p>Which of the following unit will choose to transform decimal number to binary code ?</p>	<ol style="list-style-type: none"> <li>1. <b>Encoder</b></li> <li>2. Decoder</li> <li>3. Multiplexer</li> <li>4. Counter</li> </ol>

<p>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</p>	<p>1. 30</p> <p>2. <b>31</b></p> <p>3. 32</p> <p>4. 33</p>
<p>The capacity of a memory unit is defined by the number of words multiplied by the number of bits/word. How many separate address and data lines are needed for a memory of 4 K × 16?</p>	<p>1. 10 address, 16 data lines</p> <p>2. 11 address, 8 data lines</p> <p>3. 12 address, 12 data lines</p> <p>4. <b>12 address, 16 data lines</b></p>
<p>Suppose a circular queue of capacity (n ? 1) elements is implemented with an array of n elements. Assume that the insertion and deletion operations are carried out using REAR and FRONT as array index variables, respectively. Initially, REAR = FRONT = 0. The conditions to detect queue full and queue empty are</p>	<p>1. <b>full: (REAR+1) mod n == FRONT empty: REAR == FRONT</b></p> <p>2. (REAR) mod n == FRONT empty: REAR == FRONT</p> <p>3. (REAR+1) mod n == Rear empty: REAR == FRONT</p> <p>4. full: (FRONT+1) mod n == FRONT empty: REAR == FRONT</p>

<p>A one to many relationship (of table A to Table B) is</p>	<p>1. <b>Where each record in table A can have one or more matching records in table B</b></p> <p>2. Where each record in table B can have one or more matching records in table A</p> <p>3. Where each record in Table B is required to have a match in table A</p> <p>4. Where each record in table A is required to have a match in table B</p>
<p>Station A uses 32 byte packets to transmit messages to Station B using a sliding window protocol. The round trip delay between A and B is 80 milliseconds and the bottleneck bandwidth on the path between A and B is 128 kbps. What is the optimal window size that A should use?</p>	<p>1. 20</p> <p>2. <b>40</b></p> <p>3. 160</p> <p>4. 320</p>
<p>The IC 8279 has -----many pins</p>	<p>1. 20</p> <p>2. 30</p> <p>3. <b>40</b></p> <p>4. 10</p>

The IC 8254 has -----many pins	<p>1. 24</p> <p>2. <b>28</b></p> <p>3. 34</p> <p>4. 40</p>
The IC 8254 has -----many 16 bit counters	<p>1. 1</p> <p>2. 2</p> <p>3. <b>3</b></p> <p>4. 4</p>
Each counter of IC 8254 can work in ---- -----differnt modes of operation	<p>1. <b>6</b></p> <p>2. 5</p> <p>3. 4</p> <p>4. 3</p>
DCL stands for	<p>1. <b>Data Control Language</b></p> <p>2. Data Console Language</p> <p>3. Data Console Level</p> <p>4. Data Control Level</p>

Two computers C1 and C2 are configured as follows. C1 have IP address as 203.197.2.53 and netmask 255.255.128.0. C2 have IP address as 203.197.75.201 and netmask 255.255.192.0. Which one of the following statements is true?	<p>1. C1 and C2 both assume they are on the same network</p> <p>2. C2 assumes C1 is on same network, but C1 assumes C2 is on a different network</p> <p><b>3. C1 assumes C2 is on same network, but C2 assumes C1 is on a different network</b></p> <p>4. C1 and C2 both assume they are on different networks.</p>
Relations produced from an E - R model will always be in	<b>1.3 NF</b> 2.B CNF 3.2 NF 4.1 NF
There are n stations in a slotted LAN. Each station attempts to transmit with a probability p in each time slot. What is the probability that only one station transmits in a given time slot?	<p>1. <math>(1-p)^{(n-1)}</math></p> <p><b>2. <math>np(1-p)^{(n-1)}</math></b></p> <p>3. <math>p(1-p)^{(n-1)}</math></p> <p>4. <math>1-(1-p)^{(n-1)}</math></p>
The following is not a Relational Model Constraint	<b>1.Referential Integrity Constraint</b> 2.Check Constraint 3.Foreign Key Constraint 4.Entity Integrity Constraint
An advantage of the database approach is	<p>1.Elimination of the data redundancy</p> <p>2.Ability to associate related data</p> <p>3.Increase security <b>4.All of the options</b></p>



In the multi-programming environment, the main memory consisting of _____ number of process.	<p>1. Greater than 100</p> <p>2. only one</p> <p>3. Greater than 50</p> <p>4. <b>More than one</b></p>
<p>In a token ring network the transmission speed is <math>10^7</math> bps and the propagation speed is 200 metres/micro second.</p> <p>The 1-bit delay in this network is equivalent to:</p>	<p>1. 500 metres of cable. 2. 200 metres of cable.</p> <p><b>3. 20 metres of cable.</b> 4. 50 metres of cable.</p>
<p>Security testing attempts to verify that protection mechanisms built into a system protect it from improper penetration</p>	<p><b>1. true</b></p> <p>2. false</p> <p>3. 4.</p>
Which of the following is not characteristics of a relational database model	<p>1. Complex logical relationships <b>2. Treelike structure</b> 3. Tables</p> <p>4. Records</p>
The relational model uses some unfamiliar terminology. A tuple is equivalence to a:	<p><b>1. record</b> 2. field 3. file 4. database</p>

A relational database is	<p>1.the same as a flat file database</p> <p>2.one that consists of two or more tables that are joined in some way</p> <p>3.one that consists of two or more tables</p> <p><b>4.a database that is able to process tables, queries, forms, reports and macros</b></p>
Desirable properties of relational database design include	<p><b>1.All of the options</b></p> <p>2.minimizing update anomalies</p> <p>3.minimizing redundancy</p> <p>4.minimizing insertion/deletion anomalies</p>
A software package designed to store and manage databases	<p>1.Database</p> <p>2.<b>DBMS</b></p> <p>3.Data Model</p> <p>4.Data</p>
In the architecture of a database system external level is the	<p><b>1.view level</b></p> <p>2.conceptual level</p> <p>3.logical level</p> <p>4.physical level</p>

_____ is a logical unit of access to a DBMS	<b>1.Transaction</b> 2.Optimization 3.Schema 4.Data
The RDBMS terminology for a row is	1.attribute 2.relation 3.degree <b>4.tuple</b>
An Entity from an ER diagram can be represented in the relational model by a	<b>1.relation</b> 2.domain 3.functional dependency 4.single attribute
Which one of the following is not the responsibility of the DBA?	1.provide security <b>2.develop applications</b> 3.periodically tunes the database 4.restores the system after a failure
Which of the following is TRUE?	1. Every relation in 2NF is also in BCNF 2. A relation R is in 3NF if every non-prime attribute of R is fully functionally dependent on every key of R 3. <b>Every relation in BCNF is also in 3NF</b> 4. No relation can be in both BCNF and 3NF

Which one of the following statements is FALSE?	<p>1. Any relation with two attributes is in BCNF</p> <p>2. A relation in which every key has only one attribute is in 2NF</p> <p>3. A prime attribute can be transitively dependent on a key in a 3 NF relation.</p> <p>4. <b>A prime attribute can be transitively dependent on a key in a BCNF relation.</b></p>
Let E1 and E2 be two entities in an E/R diagram with simple single-valued attributes. R1 and R2 are two relationships between E1 and E2, where R1 is one-to-many and R2 is many-to-many. R1 and R2 do not have any attributes of their own. What is the minimum number of tables required to represent this situation in the relational model?	<p>1. 2</p> <p><b>2. 3</b></p> <p>3. 4</p> <p>4. 5</p>
Select operation in SQL is equivalent to	<p>1. the selection operation in relational algebra</p> <p>2. the selection operation in relational algebra, except that select in SQL retains duplicates</p> <p>3. the projection operation in relational algebra</p>
	<p>4. <b>the projection operation in relational algebra, except that select in SQL retains duplicates</b></p>

Grant and revoke are ..... statements.	<ol style="list-style-type: none"> <li>1. DDL</li> <li>2. TCL</li> <li>3. DCL</li> <li>4. DML</li> </ol>
..... command can be used to modify a column in a table	<ol style="list-style-type: none"> <li>1. alter</li> <li>2. update</li> <li>3. set</li> <li>4. create</li> </ol>
Data independence means	<ol style="list-style-type: none"> <li>1. data is defined separately and not included in programs.</li> <li>2. programs are not dependent on the physical attributes of data</li> <li>3. programs are not dependent on the logical attributes of data</li> <li>4. programs are not dependent on both physical and logical attributes of data</li> </ol>
..... is preferred method for enforcing data integrity	<ol style="list-style-type: none"> <li>1. Constraints</li> <li>2. Stored Procedure</li> <li>3. Triggers</li> <li>4. Cursors</li> </ol>

Which of the following is not a binary operator in relational algebra?	1. Join 2. Semi-Join 3. Assignment <b>4. Project</b>
Which of the following is/are the DDL statements?	1. Create 2. Drop 3. Alter <b>4. All of the options</b>
Which database level is closest to the users?	<b>1. External</b> 2. Conceptual 3. Internal 4. Physical
..... data type can store unstructured data	<b>1. RAW</b> 2. CHAR 3. NUMERIC 4. VARCHAR
A table can have only one	1. Secondary key 2. Alternate key 3. Unique key <b>4. Primary key</b>

When a new row is inserted the constraints that can be violated are	<ol style="list-style-type: none"> <li>1. <b>Primary Key constraint</b></li> <li>2. Referential Integrity Constraint</li> <li>3. all of the options</li> <li>4. Domain Constraint</li> </ol>
Which of the following is not a property of a transaction?	<ol style="list-style-type: none"> <li>1. atomicity</li> <li>2. consistency</li> <li>3. dirty read</li> <li>4. <b>durability</b></li> </ol>
The work of EU is _____	<ol style="list-style-type: none"> <li>1. encoding</li> <li>2. decoding</li> <li>3. <b>processing</b></li> <li>4. calculations</li> </ol>

CPU Scheduling is the basis of _____ operating system	<p>1. <b>Batch</b></p> <p>2. Real Time</p> <p>3. Multi-programming</p> <p>4. network</p>
Which one of the file allocation scheme cannot be adopted for dynamic storage allocation	<p>1. Linked allocation</p> <p>2. <b>Fixed Indexed allocation</b></p> <p>3. Variable Indexed allocation</p> <p>4. Contiguous allocation</p>
Calculate the block number in free storage management of files system with number of bits per word is 8, the bit vector is 0001101010101, offset of first 1 bit is 3	<p>1. <b>59</b></p> <p>2. 51</p> <p>3. 45</p> <p>4. 53</p>
Which of the following is a problem of file management system?	<p>1. difficult to update</p> <p>2. lack of data independence</p> <p>3. data redundancy</p> <p>4. <b>all options given</b></p>



The call to the parameterized constructor of base class in the derived class	1. appears inside the definition of the derived class constructor 2. appears in the member initialization list of the derived class constructor 3. appears inside the definition of the derived class 4. <b>appears at the statement where the derived class object is created</b>
Which directory implementation method creates more dangling pointers?	1. Single level directories 2. Two level directories 3. Tree Structured Directories 4. <b>Acyclic graph directories</b>
Consider the join of a relation R with relation S. If R has m tuples and S has n tuples, then the maximum size of join is:	1. <b>mn</b> 2. m+n 3. (m+n)/2 4. 2(m+n)
Select the conflicting operation:	1. $r_1(x), w_2(y)$ 2. $r_1(x), w_1(x)$ 3. $w_1(y), w_2(x)$ 4. <b><math>r_1(x), w_2(x)</math></b>

In the operation read_item(x), what does x mean?	<p>1. a file</p> <p>2. a record</p> <p>3. a disk block</p> <p><b>4. all of the options</b></p>
DML is provided for	<p>1. Description of logical structure of database.</p> <p>2. Addition of new structures in the database system.</p> <p><b>3. Manipulation &amp; processing of database.</b></p> <p>4. Definition of physical structure of database system.</p>
Consider the relation R1(employee_name, project_name, dependent_name). If {{employee_name -->> project_name}, {employee_name -->> dependent_name}}, what is the highest normal form it satisfies?	<p><b>1. 2NF</b></p> <p>2. 3NF</p> <p>3. BCNF</p> <p>4. 4NF</p>

Which one of the following is not a windows file system?	1. FAT 2. NTFS 3. FAT32 <b>4. EXT</b>
The stream insertion operator should be overloaded as	1.friend functions 2.member function 3 .non member functions <b>4.static functions</b>
Spurious tuples are formed because of	1. <b>join operation done on a non-key attribute</b> 2. outer join operation 3. transitive dependencies 4. inner join
Query Tree uses	1. Relational Algebra 2. Tuple Relational Calculus 3. Domain Relational Calculus <b>4. All of the options</b>

<p>What is the highest normal form level satisfied by the following table design?</p> <p><math>R=\{A1,A2,A3,A4,A4\}</math> <math>F=\{A1 \rightarrow A3, A3 \rightarrow A4\}</math> Key <math>=\{A1,A2\}</math></p>	<ol style="list-style-type: none"> <li>1 NF</li> <li><b>2 NF</b></li> <li>3 NF</li> <li>BCNF</li> </ol>
<p>Some code optimizations are carried out on the intermediate code because</p>	<ol style="list-style-type: none"> <li>1. The information from data flow analysis cannot otherwise be used for optimization</li> <li><b>2. They enhance the portability of the compiler to other target processors</b></li> <li>3. The information from the front end cannot otherwise be used for optimization</li> <li>4. Program analysis is more accurate on intermediate code than on machine code</li> </ol>
<p>Why 'critical section' is not imposed on file systems instead 'file locks' when more than one process tries to access the file?</p>	<ol style="list-style-type: none"> <li>1. Time consuming</li> <li>2. Process entered in to critical section may close the file</li> <li><b>3. we cannot satisfy the three conditions of mutual exclusion, progress and bounded waiting</b></li> <li>4. we cannot use semaphore</li> </ol>
<p>The virtual file system provides us the following</p>	<ol style="list-style-type: none"> <li>1. Object oriented file implementation</li> <li><b>2. Structured programming file implementation</b></li> <li>3. Linked file allocation</li> <li>4. Indexed file allocation</li> </ol>

<p>A client process P needs to make a TCP connection to a server process S. Consider the following situation: the server process S executes a socket(), a bind() and a listen() system call in that order, following which it is preempted. Subsequently, the client process P executes a socket() system call followed by connect() system call to connect to the server process S. The server process has not executed any accept() system call. Which one of the following events could take place?</p>	<ol style="list-style-type: none"> <li>1. connect () system call returns successfully</li> <li>2. connect () system call blocks</li> <li>3. <b>connect () system call returns an error</b></li> <li>4. connect () system call results in a core dump</li> </ol>
<p>In a circular linked list</p>	<ol style="list-style-type: none"> <li>1.components are arranged hierarchically</li> <li>2.<b>there is no beginning and no end</b></li> <li>3.forward and backward traversal within the list is permitted</li> <li>4.components are arranged from top to bottom</li> </ol>
<p>How to create a memory without a name during the execution of the program?</p>	<p>1.<b>malloc()</b> 2.Queue 3.stack 4.list</p>
<p>The minimum number of nodes in a binary tree of depth d (root at level 0) is</p>	<p>1.<math>2d - 1</math> 2.<b><math>d + 1</math></b> 3.<math>2d + 1 - 1</math> 4.d</p>
<p>Interpolation search is an improved variant of binary search. It is necessary for this search algorithm to work that data collection should be</p>	<ol style="list-style-type: none"> <li>1.<b>in sorted form and equally distributed</b></li> <li>2.in sorted form and but not equally distributed</li> <li>3.equally distributed but not sorted</li> <li>4.unsorted and not evenly distributed</li> </ol>
<p>Let <math>T(n)</math> be the function defined by <math>T(n) = 1</math> and <math>T(n) = 2T(n/2) + n</math>, which of the following is TRUE ?</p>	<ol style="list-style-type: none"> <li>1.<math>T(n) = O(n)</math></li> <li>2.<math>T(n) = O(\log^2 n)</math></li> <li>3.<b><math>T(n) = O(n)</math></b></li> <li>4.<math>T(n) = O(n^2)</math></li> </ol>
<p>What is the time complexity for binary search</p>	<p>1.<b><math>O(\log n)</math></b> 2.<math>O(n^2)</math> 3.<math>O(1)</math> 4.<math>O(2n)</math></p>
<p>Consider a hash table with 9 slots. The hash function is <math>h(k)</math></p>	

<p><math>= k \bmod 9</math>. The collisions are resolved by chaining. The following 9 keys are inserted in the order: 5, 28, 19, 15, 20, 33, 12, 17, 10. The maximum, minimum, and average chain lengths in the hash table, respectively, are</p>	<p>1. 3, 3, and 3 2. 3, 0, and 1 3. 4, 0, and 1 4. 3, 0, and 2</p>
<p>The data structure required for Breadth First Traversal on a graph is</p>	<p>1. tree 2. array 3. stack 4. queue</p>
<p>You have an array of <math>n</math> elements, Suppose you implement quicksort by always choosing the central element of the array as the pivot, Then the tightest upper bound for the worst case performance is</p>	<p>1. <math>O(\log n)</math> 2. <math>O(n)</math> 3. <math>O(n^2)</math> 4. <math>O(1)</math></p>
<p>Architecture of the database can be viewed as</p>	<p>1. two levels 2. four levels 3. three levels 4. one level</p>
<p>Suppose P, Q, R, S, T are sorted sequences having lengths 20, 24, 30, 35, 50 respectively. They are to be merged into a single sequence by merging together two sequences at a time, The number of comparisons that will be needed in the worst case by the optimal algorithm for doing this is ____</p>	<p>1. 672 2. 740 3. 358 4. 354</p>
<p>Let P be a QuickSort Program to sort numbers in ascending order using the first element as pivot, Let <math>t_1</math> and <math>t_2</math> be the number of comparisons made by P for the inputs {1, 2, 3, 4, 5} and {4, 1, 5, 3, 2} respectively, Which one of the following holds?</p>	<p>1. <math>t_1 = 5</math> 2. <math>t_1 &gt; t_2</math> 3. <math>t_1 &lt; t_2</math> 4. <math>t_1 = t_2</math></p>

<p>If the disk size is <math>2^{30}</math> bytes and block size is <math>2^{12}</math> bytes then find how many such blocks are there?</p>	<ol style="list-style-type: none"> <li>1. <math>2^{42}</math></li> <li>2. <b><math>2^{18}</math></b></li> <li>3. <math>2^{360}</math></li> <li>4. <math>2^{30}</math></li> </ol>
<p>Which of the following file access method needs a relative block number 'n'?</p>	<ol style="list-style-type: none"> <li>1. Contiguous allocation</li> <li>2. Linked allocation</li> <li>3. <b>Direct access</b></li> <li>4. Sequential access</li> </ol>
<p>In case of entity integrity, the primary key may be</p>	<ol style="list-style-type: none"> <li>1. <b>not Null</b></li> <li>2. Null</li> <li>3. a foreign key</li> <li>4. any value</li> </ol>

In an E-R diagram an entity set is represent by a	<p>1. rectangle</p> <p>2. ellipse</p> <p>3. diamond box</p> <p>4. circle</p>
Which of the following is a legal expression in SQL?	<p>1. SELECT NULL FROM EMPLOYEE;</p> <p>2. SELECT NAME FROM EMPLOYEE;</p> <p>3. SELECT NAME FROM EMPLOYEE WHERE SALARY = NULL;</p> <p>4. None of the options</p>
Which of the following is a comparison operator in SQL?	<p>1. =</p> <p>2. LIKE</p> <p>3. BETWEEN</p> <p>4. all of the options</p>



Consider the join of a relation R with relation S. If R has m tuples and S has n tuples, then the maximum size of join is:	<ol style="list-style-type: none"> <li>1. mn</li> <li>2. m + n</li> <li>3. <math>(m + n) / 2</math></li> <li>4. <math>2(m + n)</math></li> </ol>
_____ is a basic unit of CPU utilization	<ol style="list-style-type: none"> <li>1. Process</li> <li>2. Thread</li> <li>3. Process Control Block</li> <li>4. Program Counter</li> </ol>
SELECT department_id, COUNT(last_name) FROM employees;	<ol style="list-style-type: none"> <li>1. Displays a error</li> <li>2. Displays the department ID along with the number of employees in each department.</li> <li>3. None of the options</li> <li>4. Displays department ID and a null value</li> </ol>

<p>SELECT department_id, AVG(salary) FROM employees WHERE AVG(salary) &gt; 8000 GROUP BY department_id</p>	<p>1. Displays the department ID along with the average salary of employees in each department if their average of salary is greater than 8000.</p> <p><b>2. Displays a error</b></p> <p>3. Displays the department ID along with the average salary of employees</p> <p>4. None of the options</p>
<p>what is the output for the following function? LPAD(salary,10,'*')</p>	<p>1. 10***24000</p> <p>2. <b>*****24000</b></p> <p>3. 24000*****</p> <p>4. error</p>

<p>SELECT employee_id, last_name FROM employees WHERE salary = (SELECT MIN(salary) FROM employees GROUP BY department_id);</p>	<p>1. Displays the employee_id and name of employees who gets minimum salary in their department</p> <p>2. Error</p> <p>3. None of the options</p> <p>4. Displays the employee_id, name of employees and their salary</p>
<p>when you were asked to design a relation, you come across a situation, where passport number is to be included for the people. All the students won't be having passport. So what constraint you would be using?</p>	<p>1. Primary Key</p> <p>2. Not Null</p> <p>3. Default</p> <p>4. Unique</p>
<p>Parallelism and concurrency is fully achieved in which of the following thread model</p>	<p>1. Many-to-one model</p> <p>2. Many-to-many</p> <p>3. one-to-one model</p> <p>4. All the models</p>

create table student_\$( id number(4), namee varchar2(10)); reponse would be	1. Error <b>2. Table created</b> 3. Table created with error 4. Table created with data
The high paging activity is called _____	1. Inter process communication <b>2. Thrashing</b> 3. Context Switching 4. Working Set
The worst case running time to search for an element in a balanced in a binary search tree with $n \cdot 2^n$ elements is	1. $\theta(n \log n)$ 2. $\theta(n \cdot 2^n)$ <b>3. <math>\theta(n)</math></b> 4. $\theta(\log n)$
Suppose a circular queue of capacity $(n - 1)$ elements is implemented with an array of $n$ elements. Assume that the insertion and deletion operation are carried out using REAR and FRONT as array index variables, respectively. Initially, REAR = FRONT = 0. The conditions to detect queue full and queue empty are	1. Full: $(\text{REAR} + 1) \bmod n == \text{FRONT}$ , empty: $\text{REAR} == \text{FRONT}$ 2. Full: $(\text{REAR} + 1) \bmod n == \text{FRONT}$ , empty: $(\text{FRONT} + 1) \bmod n == \text{REAR}$ 3. Full: $\text{REAR} == \text{FRONT}$ , empty: $(\text{REAR} + 1) \bmod n == \text{FRONT}$ <b>4. Full: <math>(\text{FRONT} + 1) \bmod n == \text{REAR}</math>, empty: <math>\text{REAR} == \text{FRONT}</math></b>
System prototypes allow users	<b>1. to see how well the system supports their work</b> 2. to start working on the system 3. to put the system to production 4. to program the software

While inserting the elements 71,65,84,69,67,83 in an empty binary search tree (BST) in the sequence shown, the element in the lowest level is	<p>1. 45</p> <p>2. <b>67</b></p> <p>3. 34</p> <p>4. 78</p>
For an undirected graph with n vertices and e edges, the sum of the degree of each vertex is equal to	<p>1. 2n</p> <p>2. <math>(2n-1)/2</math></p> <p>3. <b>2e</b></p> <p>4. <math>\text{pow}(e,2)/2</math></p>
Which character function can be used to return a specified portion of a character string?	<p>1. INSTR</p> <p>2. SUBSTRING</p> <p>3. <b>SUBSTR</b></p> <p>4. POS</p>

<p>The UNION SQL clause can be used with...</p>	<ol style="list-style-type: none"> <li>1. none of the options</li> <li>2. <b>the SELECT clause only</b></li> <li>3.</li> <li>the UPDATE clause only</li> <li>4.</li> <li>the DELETE and UPDATE clauses</li> </ol>
<p>Which is a major problem with SQL?</p>	<ol style="list-style-type: none"> <li>1. SQL cannot support object-orientation</li> <li>2. <b>The same query can be written in many ways, each with vastly different execution plans.</b></li> <li>3. SQL syntax is too difficult for non-computer professionals to use</li> <li>4. SQL creates excessive locks within the database</li> </ol>
<p>Which SQL functions is used to count the number of rows in a SQL query?</p>	<ol style="list-style-type: none"> <li>1. Sum</li> <li>2. <b>Count</b></li> <li>3. Max</li> <li>4. ALL</li> </ol>

The SQL BETWEEN operator	<ul style="list-style-type: none"><li>1. Specifies a range to test</li><li>2. specifies between which tables the data is present</li><li>3. specifies the columns between which columns the data is present</li><li>4. None of the options</li></ul>
Which date function is used to obtain the date of next Wednesday	<ul style="list-style-type: none"><li>1. NEXT_DAY</li><li>2. LAST_DAY</li><li>3. NEXT_DATE</li><li>4. All of the options</li></ul>
Insert into Emp(101, 'XXX') gives the following error	<ul style="list-style-type: none"><li>1. missing Select keyword</li><li>2. Missing Values</li><li>3. both of the errors</li><li>4. No of the errors</li></ul>

<p>The following SQL is which type of join:</p> <pre>SELECT CUSTOMER_T. CUSTOMER_ID, ORDER_T. CUSTOMER_ID, NAME, ORDER_ID FROM CUSTOMER_T,ORDER_T ;</pre>	<ol style="list-style-type: none"> <li>1. Equi-join</li> <li>2. Natural join</li> <li>3. Outer join</li> <li>4. <b>Cartesian join</b></li> </ol>
<p>Which of the following can be a valid column name?</p>	<ol style="list-style-type: none"> <li>1. Column</li> <li>2. 1966_Invoices</li> <li>3. <b>Catch_#22</b></li> <li>4. #Invoices</li> </ol>
<p>Which one of the following regular 100 as a substring (a) <math>0^*(11)^*0^*</math> (b) <math>(0^*1010)^*</math> (c) <math>0^*1^*010</math> (d) <math>0^*(10)^*01^*</math></p>	<ol style="list-style-type: none"> <li>1. a and b</li> <li>2. b and c</li> <li>3. <b>only c</b></li> <li>4. only b</li> </ol>



<p>The number of states in DFA is -----than the number of states in NFA for the same Language.</p>	<ol style="list-style-type: none"> <li>1. Greater</li> <li>2. <b>less</b></li> <li>3. greater equal</li> <li>4. equal</li> </ol>
<p>In a virtual memory environment</p>	<ol style="list-style-type: none"> <li>1. <b>segmentation and page tables are stored in the cache and do not add any substantial overhead</b></li> <li>2. slow down the computer system considerable</li> <li>3. segmentation and page tables are stored in the RAM</li> <li>4. only page table is stored in cache</li> </ol>
<p>When there are infinite distinguishable strings then there cannot be a -----</p>	<ol style="list-style-type: none"> <li>1. automata</li> <li>2. <b>finite automata</b></li> <li>3. regular expression</li> <li>4. both finite automata and regular expression</li> </ol>

<p>A NFA converted to DFA has more than one final state.</p>	<p>1. <b>True</b></p> <p>2. False</p> <p>3. may be true</p> <p>4. always true</p>
<p>If M1 machine recognizing L with n states, then M2 recognizing <math>L^*</math> constructed Using Thompson construction will have ----- states.</p>	<p>1. n</p> <p>2. <b><math>n+1</math></b></p> <p>3. <math>n+2</math></p> <p>4. <math>n-1</math></p>
<p>When we concatenate two languages L1 and L2 recognized by machine M1 and M2 we obtain a machine with final state same as that of _____</p>	<p>1. M2</p> <p>2. <b>M1 and M2</b></p> <p>3. M1</p> <p>4. M1 or M2</p>

The intersection of CFL and regular language	<ol style="list-style-type: none"> <li>1. Is always regular and context free</li> <li>2. Is always regular</li> <li><b>3. Is always context free</b></li> <li>4. Need not be regular</li> </ol>
Consider $S \rightarrow SS   a$ what is the number of different derivation trees for aaaaa	<ol style="list-style-type: none"> <li>1. 5</li> <li>2. 3</li> <li><b>3. 14</b></li> <li>4. 7</li> </ol>
Which is not part of the waterfall method?	<ol style="list-style-type: none"> <li>1. Requirements Definition</li> <li>2. System and Software Design</li> <li>3. Implementation and Unit Testing</li> <li><b>4. System Validation</b></li> </ol>
What is based on the idea of developing an initial implementation, exposing this to user comment and evolving it through several versions until an adequate system has been developed?	<ol style="list-style-type: none"> <li>1. The Waterfall Method</li> <li><b>2. Incremental Development</b></li> </ol>

	<p>3. Reuse-oriented Software Engineering</p> <p>4. Implementation And Unit Testing</p>
<p>If all page frames are initially empty, and a process is allocated 3 page frames in real memory and references its pages in the order 1 2 3 2 4 5 2 3 2 4 1 and the page replacement is FIFO, the total number of page faults caused by the process will be _____</p>	<p>1. 10</p> <p>2. 7</p> <p>3. 8</p> <p><b>4. 9</b></p>
<p>This software process model takes the fundamental activities of specification, development, validation, and evolution and represents them as separate process phases such as requirements specification, software design, implementation, testing, and so on</p>	<p>1. Incremental development</p> <p><b>2. The waterfall model</b></p> <p>3. Reuse-oriented software engineering</p> <p>4. Boehm's spiral model</p>
<p>Which statement best describes a benefit of Incremental development over the waterfall model</p>	<p>1. It is possible to gather more of the requirements up front</p> <p>2. Time to market is faster because there is less overhead</p> <p><b>3. It is easier to get customer feedback on the development work that's been done</b></p> <p>4. It is easier to reuse existing components.</p>

_____ memory management scheme will produce least fragement	<ol style="list-style-type: none"> <li>1. <b>Best Fit</b></li> <li>2. Worst Fit</li> <li>3. First Fit</li> <li>4. None of these</li> </ol>
Replace the page that has not be used for the longest period of time. This principle is adopted by _____	<ol style="list-style-type: none"> <li>1. FIFO Page replacement algorithm</li> <li>2. Optimal Page replacement algorithm</li> <li>3. Round robin scheduling algorithm</li> <li>4. <b>LRU Page replacement algoorithm</b></li> </ol>
In incremental development system structure tends to _____ as many new increments are added.	<ol style="list-style-type: none"> <li>1. <b>degrade</b></li> <li>2. improve</li> <li>3. develop its own AI</li> <li>4. shrink</li> </ol>
A computer on a 10Mbps network is regulated by a token bucket. The token bucket is filled at a rate of 2Mbps. It is initially filled to capacity with 16Megabits. What is the	<ol style="list-style-type: none"> <li>1. 1.6 seconds</li> </ol>

maximum duration for which the computer can transmit at the full 10Mbps?	<p><b>2. 2 seconds</b></p> <p>3. 5 seconds</p> <p>4. 8 seconds</p>
In incremental delivery the _____ services are typically delivered first	<p>1. quickest to complete</p> <p><b>2. highest-priority</b></p> <p>3. cheapest</p> <p>4. most fun to code</p>
A page fault occurs	<p><b>1. when the page is not in the main memory</b></p> <p>2. when the page is in the cache memory</p> <p>3. when the process enters the blocked state</p> <p>4. when the process is in the ready state</p>
Which of the following system calls results in the sending of SYN packets?	<p>1. socket</p> <p>2. bind</p> <p>3. listen</p> <p><b>4. connect</b></p>

In the slow start phase of the TCP congestion control algorithm, the size of the congestion window .....	1. does not increase 2. increases linearly 3. increases quadratically <b>4. increases exponentially</b>
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?	1. 1024 2. 1023 <b>3. 2046</b> 4. 2047
Software specifications are intended to communicate the system needs	1. of the developers to the clients 2. to marketing <b>3. of the clients to the developers</b> 4. to the general public
Activities such as documentation and software configuration management are what kind of process activities?	1. Primary 2. Validation 3. Design <b>4. supporting</b>

<p>An organization has a class B network and wishes to form subnets for 64 departments. The subnet mask would be:</p>	<ol style="list-style-type: none"> <li>1. 255.255.0.0</li> <li>2. 255.255.64.0</li> <li>3. 255.255.128.0</li> <li>4. <b>255.255.252.0</b></li> </ol>
<p>What is a software process model?</p>	<ol style="list-style-type: none"> <li>1. <b>A simplified representation of a software process</b></li> <li>2. A presentation put together in Powerpoint</li> <li>3. A work flow model of the software's components</li> <li>4. A prototype of the final software product</li> </ol>
<p>Routine is not loaded until it is called. All routines are kept on disk in a relocatable load format. The main program is loaded into memory &amp; is executed. This type of loading is called _____</p>	<ol style="list-style-type: none"> <li>1. Static loading</li> <li>2. Dynamic loading</li> <li>3. <b>Dynamic linking</b></li> <li>4. Overlays</li> </ol>
<p>The result evaluating the postfix expression (10 5 + 60 6 / * 8 -) is</p>	<ol style="list-style-type: none"> <li>1. 284</li> <li>2. <b>142</b></li> <li>3. 213</li> <li>4. 71</li> </ol>
<p>Packets of the same session may be routed through different paths in:</p>	<ol style="list-style-type: none"> <li>1. TCP, but not UDP</li> <li>2. <b>TCP and UDP</b></li> <li>3. UDP, but not TCP</li> <li>4. Neither TCP nor UDP</li> </ol>



<p>The address resolution protocol (ARP) is used for:</p>	<ol style="list-style-type: none"> <li>1. Finding the IP address using DNS</li> <li>2. Finding the IP address of the default gateway</li> <li>3. Finding the IP address that corresponds to a MAC address</li> <li>4. <b>Finding the MAC address that corresponds to an IP address</b></li> </ol>
<p>The removal of process from active contention of CPU and reintroduce them into memory later is known as _____</p>	<ol style="list-style-type: none"> <li>1. Interrupt</li> <li>2. <b>Swapping</b></li> <li>3. Signal</li> <li>4. Thread</li> </ol>
<p>Paging _____</p>	<ol style="list-style-type: none"> <li>1. <b>solves the memory fragmentation problem</b></li> <li>2. allows modular programming</li> <li>3. allows structured programming</li> <li>4. avoids deadlock</li> </ol>

Which of the following memory allocation scheme suffers from External fragmentation?	<ol style="list-style-type: none"> <li>1. <b>Segmentation</b></li> <li>2. Pure Demand Paging</li> <li>3. swapping</li> <li>4. paging</li> </ol>
One of the header fields in an IP datagram is the Time to Live (TTL) field. Which of the following statements best explains the need for this field?	<ol style="list-style-type: none"> <li>1. It can be used to prioritize packets</li> <li>2. It can be used to reduce delays</li> <li>3. It can be used to optimize throughput</li> <li>4. <b>It can be used to prevent packet looping</b></li> </ol>
A system uses FIFO policy for page replacement. It has 4 page frames with no pages loaded to begin with. The system first accesses 100 distinct pages in some order and accesses the same 100 pages but now in the reverse order how many page faults will occur?	<ol style="list-style-type: none"> <li>1. <b>196</b></li> <li>2. 192</li> <li>3. 197</li> <li>4. 195</li> </ol>
What will be the status of a computer during storage compaction	<ol style="list-style-type: none"> <li>1. High paging activity</li> <li>2. Thrashing happens</li> <li>3. Working set model developed</li> <li>4. <b>It will sit idle</b></li> </ol>
A layer-4 firewall cannot	<ol style="list-style-type: none"> <li>1. <b>block HTTP traffic during 9:00PM and 5:00AM</b></li> <li>2. block all ICMP traffic</li> <li>3. stop incoming traffic from a specific IP address but allow outgoing traffic to same IP</li> <li>4. block TCP traffic from a specific user on a specific IP address on multi-user system during 9:00PM and 5:00AM</li> </ol>

Consider an instance of TCP's Additive Increase Multiplicative Decrease(AIMD) algorithm where the window size at the start of the slow start phase is 2 MSS and the threshold at the start of the first transmission is 8 MSS. Assume that a timeout occurs during the fifth transmission. Find the congestion window size at the end of the tenth transmission.	<ol style="list-style-type: none"> <li>1. 8 MSS</li> <li>2. 14 MSS</li> <li><b>3. 7 MSS</b></li> <li>4. 12 MSS</li> </ol>
The MMU (Memory Management Unit) is a	<ol style="list-style-type: none"> <li><b>1. Hardware</b></li> <li>2. Software</li> <li>3. Firmware</li> <li>4. Malware</li> </ol>
Which of the following is true?	<ol style="list-style-type: none"> <li>1. Segmentation is faster than paging</li> <li><b>2. Paging is faster than segmentation</b></li> <li>3. Pages are unequal sized pieces</li> <li>4. Segments are equal sized pieces</li> </ol>
Which question no longer concerns the modern software engineer?	<ol style="list-style-type: none"> <li><b>1. Why does computer hardware cost so much?</b></li> <li>2. Why does software take a long time to finish?</li> <li>3. Why does it cost so much to develop a piece of software?</li> <li>4. Why can't software errors be removed from products prior to delivery?</li> </ol>

Today the increased power of the personal computer has brought about an abandonment of the practice of team development of software	1. <b>True</b> 2. false 3. 4.
Software is a product and can be manufactured using the same technologies used for other engineering artifacts.	1. True 2. <b>False</b> 3. 4.
Change cannot be easily accommodated in most software systems, unless the system was designed with change in mind.	1. <b>True</b> 2. False 3. 4.
The linear sequential model of software development is	1. <b>A reasonable approach when requirements are well defined.</b> 2. A good approach when a working program is required quickly. 3. The best approach to use for projects with large development teams. 4. An old fashioned model that cannot be used in a modern context.
The linear sequential model of software development is also known as the	1. Classical life cycle model 2. Spiral model 3. <b>Waterfall model</b> 4. Incremental Model
Data Members of the base class that are marked private:	1. does exist in memory when the object of the derived class is created 2. <b>exist in memory when the object of the derived class is created</b> 3. <b>the derived class</b> 3. are visible in the derived class 4. are directly accessible in the derived class

The incremental model of software development is	<p>1. A reasonable approach when requirements are well defined.</p> <p><b>2. A good approach when a working core product is required quickly.</b></p> <p>3. The best approach to use for projects with large development teams.</p> <p>4. A revolutionary model that is not used for commercial products.</p>
The rapid application development model is	<p>1. Another name for component-based development.</p> <p>2. Another name for component-based development.</p> <p><b>3. A high speed adaptation of the linear sequential model.</b></p> <p>4. ALL</p>
<p>Given the code</p> <p>String s1 = ? VIT? ;</p> <p>String s2 = ? VIT ? ;</p> <p>String s3 = new String ( s1);</p> <p>Which of the following would equate to true?</p>	<p>1. s1 == s2</p> <p>2. s1 = s2</p> <p><b>3. s3 == s1</b></p> <p>4. s3=s1</p>
_____ is referred to as Static Web	<p><b>1. Web 1.0</b></p> <p>2. Web 2.0</p> <p>3. Web 3.0</p> <p>4. Web 4.0</p>
How do you write "Hello World" in PHP?	<p>1. using System.out.println</p> <p>2. using Document.Write("Hello World")</p> <p>3. "Hello World"</p> <p><b>4. using echo("Hello World")</b></p>

What does JSP stand for?	<ol style="list-style-type: none"><li>1. Java Scripting Pages</li><li>2. Java Service Pages</li><li>3. Java Server Pages</li><li>4. Java Script Program</li></ol>
What are the parameters of the service method?	<ol style="list-style-type: none"><li>1. ServletRequest and ServletResponse</li><li>2. <b>HttpServletRequest and HttpServletResponse</b></li><li>3. HttpRequest and HttpResponse</li><li>4. Request and Response</li></ol>
Which of these methods has no restrictions on content size when a form is submitted.	<ol style="list-style-type: none"><li>1. GET</li><li>2. HEAD</li><li>3. <b>POST</b></li><li>4. PUT</li></ol>

<p>The following function computes the maximum value contained in an integer array p[ ] of size n (n &gt;= 1). int max(int *p, int n) { int a=0, b=n-1; while ( _____ ) { if (p[a] &lt;= p[b]) { a = a+1; } else { b = b-1; } } return p[a]; }</p> <p>The missing loop condition is</p>	<ol style="list-style-type: none"> <li>1. a != n</li> <li>2. b != 0</li> <li>3. b &gt; (a+1)</li> <li>4. <b>b != a</b></li> </ol>
<p>Consider the following recursive C function.</p> <pre>Void get (int n) {if (n&lt;1) return; get (n-1) get (n-3) ; printf ("%d",n);</pre> <p>If get(6) function is being called in main () then how many times will the get() function be invoked before returning to the main ( ) ?</p>	<ol style="list-style-type: none"> <li>1. 15</li> <li>2. <b>25</b></li> <li>3. 43</li> <li>4. 24</li> </ol>
<p>Which of the following is/are example(s) of stateful application layer protocols?</p> <p>(i)HTTP (ii)FTP (iii)TCP (iv)POP3</p>	<ol style="list-style-type: none"> <li>1. and (ii) only</li> <li>2. ii and (iii) only</li> <li>3. <b>(ii) and (iv) only</b></li> <li>4. (iv) only</li> </ol>
<p>What will be the output of the following C program? void count(int n){ static int d=1;</p>	<ol style="list-style-type: none"> <li>1. <b>3 1 2 2 1 3 4 4 4</b></li> </ol>

<pre> printf("%d ", n); printf("%d ", d); d++; if(n&gt;1) count(n-1); printf("%d ", d); } void main(){ count(3); } </pre>	<p>2.</p> <p>3 1 2 1 1 1 2 2 2</p> <p>3.</p> <p>3 1 2 2 1 3 4</p> <p>4.</p> <p>3 1 2 1 1 1 2</p>
<p>Consider the following program:</p> <pre> int f(int *p, int n) { if (n &lt;= 1) return 0; else return max ( f (p+1, n-1),p[0]-p[1]); } int main() { int a[] = {3,5,2,6,4}; printf("%d", f(a,5)); } </pre> <p>The value printed by this program is</p>	<p>1.</p> <p>1</p> <p>2.</p> <p>2</p> <p><b>3.</b></p> <p><b>3</b></p> <p>4.</p> <p>4</p>
<p>To prevent any method from overriding, the method has to be declared as,</p>	<p>1. static</p> <p>2. const</p> <p><b>3. final</b></p> <p>4. extends</p>



A Search engine can serve as	<b>1. both as a server and a client</b> 2. As Client always 3. As Server always 4. Neither client nor server
Consider the function func shown below: <pre>int func(int num) { int count = 0; while (num) { count++; num&gt;&gt;= 1; } return</pre> The value returned by func(435)is	1. 7 2. 8 <b>3. 9</b> 4. 0
Which one is the first search engine in internet?	1. Google <b>2. Archie</b> 3. AltaVista 4. WAIS
Sockets originate from	<b>1. BSD Unix</b> 2. Windows 3. Linux 4. Mac

<p>What will be printed as the output of the following program?</p> <pre> public class testincr { public static void main(String args[]) { int i = 0; i = i++ + i; System.out.println(" I = " +i); } } </pre>	<ol style="list-style-type: none"> <li>1. I = 0</li> <li><b>2. I = 1</b></li> <li>3. I = 2</li> <li>4. I = 3</li> </ol>
<p>Which transmission media has the highest transmission speed in a network?</p>	<ol style="list-style-type: none"> <li>1. coaxial cable</li> <li>2. twisted pair cable</li> <li><b>3. optical fiber</b></li> <li>4. electrical cable</li> </ol>
<p>Bits can be send over guided and unguided media as analog signal using .....</p>	<ol style="list-style-type: none"> <li><b>1. digital modulation</b></li> <li>2. amplitude modulation</li> <li>3. frequency modulation</li> <li>4. phase modulation</li> </ol>
<p>An object of class A receives a message with an argument that is an instance of class B. Identify the type of relationship between class A and Class B:</p>	<ol style="list-style-type: none"> <li><b>1. Generalization</b></li> <li>2. Association</li> <li>3. Aggregation</li> <li>4. Realization</li> </ol>

<p>A graphical HTML browser resident at a network client machine Q accesses a static HTML webpage from a HTTP server S. The static HTML page has exactly one static embedded image which is also at S. Assuming no caching, which one of the following is correct about the HTML webpage loading (including the embedded image)?</p>	<p>1. Q needs to send at least 2 HTTP requests to S, each necessarily in a separate TCP connection to server S</p> <p><b>2. Q needs to send at least 2 HTTP requests to S, but a single TCP connection to server S is sufficient</b></p> <p>3. A single HTTP request from Q to S is sufficient, and a single TCP connection between Q and S is necessary for this</p> <p>4. A single HTTP request from Q to S is sufficient, and this is possible without any TCP connection between Q and S</p>
<p>Consider the following function written the C programming language.</p> <pre>void foo (char * a ) { if (* a &amp; &amp; * a != ' ' ){ putchar (*a); } } }</pre> <p>The output of the above function on input 'ABCD EFGH' is</p>	<p><b>1. ABCD EFGH</b></p> <p>2. ABCD</p> <p>3. HGFE DCBA</p> <p>4. DCBA</p>

<p>Given the following structure template, choose the correct syntax for accessing the 5th subject marks of the 3rd student: struct stud</p> <pre> {     int marks [6]; char sname [20]; char rno[10 ]; }s[10]; </pre>	<ol style="list-style-type: none"> <li>1. stud[2].marks[4]</li> <li>2. stud[4].marks[2]</li> <li>3. s[2].marks[4]</li> <li>4. s[4].marks[2]</li> </ol>
<p>The portion of physical layer that interfaces with the media access control sublayer is called</p>	<ol style="list-style-type: none"> <li>1. physical signalling sublayer</li> <li>2. physical data sublayer</li> <li>3. physical address sublayer</li> <li>4. none of the mentioned</li> </ol>

<p>Consider the following program:</p> <pre> int f(int *p, int n) { if (n &lt;= 1) return 0; else return max ( f (p+1, n-1),p[0]-p[1]); } int main() { int a[] = {3,5,2,6,4}; printf("%d", f(a,5)); } </pre> <p>The value printed by this program is</p>	<ol style="list-style-type: none"> <li>1. 2</li> <li>2. 1</li> <li><b>3. 3</b></li> <li>4. 4</li> </ol>
Physical layer provides	<ol style="list-style-type: none"> <li>1. mechanical specifications of electrical connectors and cables</li> <li>2. electrical specification of transmission line signal level</li> <li>3. specification for IR over optical fiber</li> <li><b>4. all of the mentioned</b></li> </ol>
The physical layer is responsible for	<ol style="list-style-type: none"> <li>1. line coding</li> <li>2. channel coding</li> <li>3. modulation</li> <li><b>4. all of the mentioned</b></li> </ol>
Calculate the EAT(Effective access time) if 5 micro second is associative look-up time and 0.80 is the hit-ratio in paging hardware with TLB	<ol style="list-style-type: none"> <li>1. 6.2 micro second</li> <li>2. 7.8 micro second</li> <li><b>3. 2.2 micro second</b></li> <li>4. 3.2 micro second</li> </ol>

In asynchronous serial communication the physical layer provides	1.start and stop signalling 2.flow control <b>3.both (a) and (b)</b> 4.none of the mentioned
The physical layer translates logical communication requests from the _____ into hardware specific operations.	<b>1. data link layer</b> 2. network layer 3. trasnport layer 4. application layer
The formal methods model of software development makes use of mathematical methods to	1. Define the specification for computerbased system 2. Develop defect free computer-based systems 3. Verify the correctness of computer-based systems <b>4. ALL</b>
Which is not related to deadlock avoidance?	1. Safe State 2. Unsafe State

	<b>3. Safe Sequence</b>  4. Resource sequence
The ____ translates internet domain and host names to IP address.	<b>1. domain name system</b>  2. routing information protocol  3. network time protocol  4. internet relay chat
Application layer protocol defines	<b>1. types of messages exchanged</b>  <b>2. message format, syntax and semantics</b>  <b>3. rules for when and how processes send and respond to messages</b>  <b>4. all of the mentioned</b>
Which of the following traits need to exist among the members of an agile software team?	1. Competence 2. Decision-making ability 3. Mutual trust and respect <b>4. ALL</b>

Which one of the following allows a user at one site to establish a connection to another site and then pass keystrokes from local host to remote host?	1. HTTP 2. FTP 3. telnet 4. none of the mentioned
A single channel is shared by multiple signals by	1. analog modulation 2. digital modulation 3. multiplexing 4. none of the mentioned
Wireless transmission can be done via	1. radio waves 2. microwaves 3. infrared 4. all of the mentioned
Which one of the following is not the process of Deadlock Recovery?	1. Killing a process 2. Rollback to the previous state 3. Selecting a Victim 4. Delaying the process
Which of the following is not one of Hooker's core principles of software engineering practice?	1. All design should be as simple as possible, but no simpler 2. A software system exists only to provide value to its users. 3. Pareto principle (20% of any product requires 80% of the effort) 4. Remember that you produce others will consume



Software engineers collaborate with customers to define which of the following?	1. Customer visible usage scenarios 2. Important software features 3. System inputs and outputs 4. <b>ALL</b>
Everyone on the software team should be involved in the planning activity so that we can	1. reduce the granularity of the plan 2. analyze requirements in depth 3. <b>get all team members to "sign up" to the plan</b> 4. begin design
When displaying a web page, the application layer uses the	<b>1. HTTP protocol</b> 2. FTP protocol 3. SMTP protocol 4. IMAP Protocol
Which one of the following protocol delivers/stores mail to receiver server?	1. <b>simple mail transfer protocol</b> 2. post office protocol 3. internet mail access protocol 4. hypertext transfer protocol

The ASCII encoding of binary data is called	<p><b>1. base 64 encoding</b></p> <p>2. base 32 encoding</p> <p>3. base 16 encoding</p> <p>4. base 8 encoding</p>
Which protocol is a signaling communication protocol used for controlling multimedia communication sessions?	<p><b>1. session initiation protocol</b></p> <p>2. session modelling protocol</p> <p>3. session maintenance protocol</p> <p>4. none of the mentioned</p>
Which one of the following is not an application layer protocol?	<p>1. media gateway protocol</p> <p>2. dynamic host configuration protocol</p> <p><b>3. resource reservation protocol</b></p> <p>4. session initiation protocol</p>
If the size of logical address space is 2 to the power of m, and a page size is 2 to the power of n addressing units, then the high order ____ bits of a logical address designate the page number, and the ____ low order bits designate the page offset.	<p>1. m,n</p> <p>2. n,m</p> <p>3. m-n,m</p> <p><b>4. m-n,n</b></p>
Which of the following activities is not one of the four things that need to be accomplished by the generic planning task set?	<p>1. Develop overall project strategy</p> <p>2. Identify the functionality to deliver in each software increment</p> <p>3. Create a detailed schedule for the complete software project</p> <p><b>4. Devise a means of tracking progress on a regular basis</b></p>

What is x+ mode in fopen() used for?	<p>1. <b>Read/Write. Creates a new file. Returns FALSE and an error if file already exists</b></p> <p>2. Write only. Creates a new file. Returns TRUE and an error if file already exists</p> <p>3. Read/Write. Opens and clears the contents of file</p> <p>4. Write. Opens and clears the contents of file</p>
In the network HTTP resources are located by	<p>1. <b>uniform resource identifier</b></p> <p>2. unique resource locator</p> <p>3. unique resource identifier</p> <p>4. unique resource identifier</p>
Which method is used for loading the driver in Java JDBC.	<p>1. getDriver() method</p> <p>2. <b>class.forName()</b></p> <p>3. createStatement()</p> <p>4. getConnection()</p>
Which of the following input controls that cannot be placed using <input> tag?	<p>1. Text</p> <p>2. Password</p> <p>3. Submit</p> <p>4. <b>Textarea</b></p>
Which of the following in HTML is used to left align the content inside a table cell?	<p>1. &lt;td ralign = "left" &gt;</p> <p>2. &lt;tdleft&gt;</p> <p>3. &lt;td leftalign&gt;</p> <p>4. <b>&lt;td align = "left"&gt;</b></p>

WiMAX provides	<ul style="list-style-type: none"> <li>1. simplex communication</li> <li>2. <b>half duplex communication</b></li> <li>3. full duplex communication</li> <li>4. none of the mentioned</li> </ul>
WiMAX uses the	<ul style="list-style-type: none"> <li>1. <b>orthogonal frequency division multiplexing</b></li> <li>2. time division multiplexing</li> <li>3. space division multiplexing</li> <li>4. all of the mentioned</li> </ul>
Which of the following operators has an associativity from Right to Left?	<ul style="list-style-type: none"> <li>1. += 2. == 3. &lt;&lt; 4. &lt;=</li> </ul>
ElGamal encryption system is	<ul style="list-style-type: none"> <li>1. symmetric key encryption algorithm</li> <li>2. <b>asymmetric key encryption algorithm</b></li> <li>3. not an encryption algorithm</li> <li>4. none of the mentioned</li> </ul>
WHICH OF THE BELOW IS NOT AN EMAIL PROTOCOL?	<ul style="list-style-type: none"> <li>1. SMTP</li> <li>2. IMAP</li> <li>3. POP</li> <li>4. <b>SNMP</b></li> </ul>
Which of the following statements explains portability in non-functional requirements?	<ul style="list-style-type: none"> <li>1. <b>It is a degree to which software running on one platform can easily be converted to run on another platform.</b></li> <li>2. It can be enhanced by using languages, OS' and tools that are universally available and standardized.</li> <li>3. The ability of the system to behave consistently in a user-acceptable manner when operating within the environment for which the system was intended.</li> <li>4. It is a degree to which software running on one platform can easily be converted to run on another platform as well as It can be enhanced by using languages, OS' and tools that are universally available and standardized.</li> </ul>

The spiral model was originally proposed by	1. IBM <b>2. Barry Boehm</b> 3. Pressman 4. Royce
Which of the following risk is the failure of a purchased component to perform as expected?	<b>1. Product risk</b> 2. Project risk 3. Business risk 4. Programming risk
Which of the following suffices to convert an arbitrary CFG to an LL(1) grammar?	1. Removing left recursion alone 2. Factoring the grammar alone 3. Removing left recursion and factoring the grammar <b>4. Removing left recursion, left factoring and ambiguity of the grammar</b>
The CFG $s \rightarrow as \mid bs \mid a \mid b$ is equivalent to regular expression	1. $(a + b)$ <b>2. <math>(a + b)(a + b)^*</math></b> 3. $(a + b)(a + b)$ 4. $(a + b)(a + b)(a + b)(a + b)$
The grammar $S \rightarrow aSa \mid bS \mid c$ is	1. LL(1) but not LR(1) 2. LR(1) but not LR(1) <b>3. Both LL(1) and LR(1)</b> 4. Neither LL(1) nor LR(1)

<p>Consider the following C code segment.</p> <pre> for (i = 0, i&lt;n; i++) {     for (j=0; j&lt;n; j++)     {         if (i%2)         {             x += (4*j + 5*i); y += (7 + 4*j);          }     } </pre>	<ol style="list-style-type: none"> <li>1. The code contains loop invariant computation</li> <li>2. There is scope of common sub-expression elimination in this code</li> <li>3. There is scope of strength reduction in this code</li> <li><b>4. There is scope of dead code elimination in this code</b></li> </ol>
<p>All the modules of the system are integrated and tested as complete system in the case of</p>	<ol style="list-style-type: none"> <li>1. Bottom up testing</li> <li>2. Top-down testing</li> <li>3. Sandwich testing</li> <li><b>4. Big-Bang testing</b></li> </ol>
<p>NOR Gate does NOT follow</p>	<ol style="list-style-type: none"> <li>1. DeMorgan's Theorem</li> <li>2. Associative Law</li> <li>3. Commutative Law</li> <li><b>4. Distributive Law</b></li> </ol>
<p>The _____ ensures that only one IC is active at a time to avoid a bus conflict caused by two ICs writing different data to the same bus</p>	<ol style="list-style-type: none"> <li>1. control bus</li> <li>2. control instructions</li> <li><b>3. address decoder</b></li> <li>4. CPU</li> </ol>
<p>In the following code snippet, what is the correct value of the left margin? margin: 10px 5px 20px 15px;</p>	<ol style="list-style-type: none"> <li>1. 10px</li> <li>2. 5px</li> <li>3. 20px</li> <li><b>4. 15px</b></li> </ol>
<p>When used with the datalist element, what is the list attribute in HTML5 used to accomplish?</p>	<ol style="list-style-type: none"> <li>1. Local databases</li> <li>2. Drop down lists</li> <li><b>3. Autocompletion</b></li> <li>4. Global Databases</li> </ol>

Which of the following boolean expressions is not logically equivalent to all of the rest ?	<p>1. <math>ab + (cd)' + cd + bd'</math></p> <p>2. <math>a(b + c) + cd</math></p> <p>3. <b><math>ab + ac + (cd)'</math></b></p> <p>4. <math>bd' + c'd' + ab + cd</math></p>
The size of the data count register of a DMA controller is 16 bits. The processor needs to transfer a file of 29,154 kilobytes from disk to main memory. The memory is byte addressable. The minimum number of times the DMA controller needs to get the control of the system bus from the processor to transfer the file from the disk to main memory is	<p>1. 454</p> <p>2. 455</p> <p>3. <b>456</b></p> <p>4. 457</p>
How do we submit form data without a Submit button?	<p>1. Using header() function 2. Using Javascript 3. Using fdf_set_submit_form_action() function 4. <b>using header() and javascript</b></p>
When a single item that triggers other data flow along one of many paths of a data flow diagram, _____ characterizes the information flow.	<p>1. <b>high coupling</b></p> <p>2. poor modularity</p> <p>3. transaction flow</p> <p>4. transform flow</p>

The embedded c program is converted by cross compiler to	1. the machine code corresponding to the processor of the PC used for application development 2. the machine code corresponding to a processor which is different from the processor of the PC used for application development 3. code for all the microcontrollers 4. assemble code of the PC used for application development
In Assembly language programming, minimum number of operands required for an instruction is/are	1. Zero 2. One 3. Two 4. Three
A 4-way set-associative cache memory unit with a capacity of 16 KB is built using a block size of 8 words. The word length is 32 bits. The size of the physical address space is 4 GB. The number of bits for the TAG field is	1. 19 2. 20 3. 21 4. 22
$ba^*c$ denotes the set	1. $\{b^na^mc^p \mid n,m,p \geq 1\}$ 2. $\{ba^nc \mid n \geq 0\}$ 3. $\{ba^nc \mid n \geq 1\}$ 4. $\{w \mid w \text{ is a string of } a,b,c\}$
Functional requirements of a system is modelled using	1. Use-case Diagram 2. Sequence Diagram 3. Class Diagram 4. Package Diagram



<p>If the main memory is of 8K bytes and the cache memory is of 2K words. It uses associative mapping. Then each word of cache memory shall be_____.</p>	<p>1. 11 bits</p> <p>2. 21 bits</p> <p><b>3. 16 bits</b></p> <p>4. 20 bits</p>
<p>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</p>	<p>1. 21</p> <p>2. 22</p> <p>3. 23</p> <p><b>4. 24</b></p>
<p>In software quality assurance work there is no difference between software verification and software validation.</p>	<p>1. true</p> <p><b>2. false</b></p> <p>3. 4.</p>
<p>The Firmware are stored in read-only memory or _____ chips.</p>	<p>1. Flash memory</p> <p>2. Dynamic random access memory</p> <p><b>3. EEPROM</b></p> <p>4. Random-access memory</p>
<p><math>(a+b)(cd)^*(a+b)</math> denotes the following set</p>	<p>1. <math>\{a(cd)^nb \mid n \geq 1\}</math></p> <p>2. <math>\{a(cd)^n \mid n \geq 1\} \cup \{b(cd)^n \mid n \geq 1\}</math></p> <p><b>3. <math>\{a(cd)^na \mid n \geq 0\} \cup \{a(cd)^nb \mid n \geq 0\} \cup \{b(cd)^na \mid n \geq 0\} \cup \{b(cd)^nb \mid n \geq 0\}</math></b></p> <p>4. <math>\{ac^nd^nb \mid n \geq 1\}</math></p>

Which of the following statements is/are TRUE for an undirected graph?P:Number of odd degree vertices is even,Q: Sum of degrees of all vertices is even	<b>1.P Only</b> 2.Q Only 3.Both P and Q 4.Neither P nor Q
Which of the following is useful in traversing a given graph by breadth first search?	1.List <b>2.Queue</b> 3.Set 4.Stack
In excitation table of D flipflop next state is equal to	1. Next State 2. Present State 3. Previous State <b>4. D State</b>
The fundamental notions of software engineering does not account for ?	1. Software reuse 2. Software Security <b>3. Software Validation</b> 4. Software processes
Which of the following is not a technology driver for an information system?	1. Collaborative technologies <b>2. Knowledge asset management</b> 3. Enterprise applications 4. Object technologies
In linear search algorithm the Worst case occurs when	1.The item is somewhere in the middle of the array 2.The item is not in the array at all 3.The item is the last element in the array <b>4.The item is the last element in the array or is not there at all</b>
Which is not a proper prototype?	<b>1. double funct(char x)</b> 2. void funct(); 3. char x(); 4. intfunct(char x, char y);
Suppose P, Q, R, S, T are sorted sequences having lengths 20,24,30,35,50 respectively. They are to be merged into a	

single sequence by merging together two sequences at a time. The number of comparisons that will be needed in the worst case by the optimal algorithm for doing this is ____	1.368 2.338 3.348 <b>4.358</b>
The searching technique that takes $O(1)$ time to find a data is	1.Binary Search 2.Linear Search 3.Tree Search <b>4.Hashing</b>
Suppose x is dead, that is, never subsequently used, at the point where the statement $x=y+z$ appears in a basic block. Then this statement may be safely removed without changing the value of the basic block. This transformation is known as _____.	1.Common subexpression elimination 2. <b>Dead code elimination</b> 3.Renaming temporary variables 4.Loop invariant
Shift reduce parsers are	1.Vertical parser 2.top down and bottom up parser <b>3.Bottom up parser</b> 4.Top down parser
Cross-compiler is a compiler	1.which is written in a language that is same as the source language. <b>2.that runs on one computer but produces object code for different type of computer.</b> 3.that generates object code for its host machine.4.which is written in a language that is different from the source language.
While inserting the elements 71,65,84,69,67,83 in an empty binary search tree(BST)in the sequence shown, the element in the lowest level is	1.65 <b>2.67</b> 3.83 4.69
Given a hash table T with 25 slots that stores 2000 elements, the load factor $\alpha$ for T is ____	<b>1.80</b> 2.0.0125 3.8000 4.1.25
Many programmers separate a class into two files: ____	1. one for the primary functions and one for the auxiliary functions 2. one for the public data and one for the private data 3. one for the void functions and one for the other functions 4. <b>one for the declarations and one for the implementations</b>

In a connected graph, a bridge is an edge whose removal disconnects a graph. Which one of the following statements is True?	1. A tree has no bridge 2. A bridge cannot be part of a simple cycle 3. Every edge of a clique with size $\geq 3$ is a bridge (A clique is any complete subgraph of a graph) <b>4. A graph with bridges cannot have a cycle</b>
Network models are complicated by physical keys, but the relation model is	1. Slower because it uses logical keys 2. Slower because it uses physical keys 3. Faster because it uses physical keys <b>4. Faster because it uses logical keys</b>
Trigger is a	1. Statement that enables to start any DBMS 2. Statement that is executed by the user when debugging an application program <b>3. Statement that is executed automatically by the system as a side effect of a modification to the database</b> 4. Condition the system tests for the validity of the database user
Normalisation of database is used to	1. Minimise Errors 2. Improve Security <b>3. Eliminate redundancy</b> 4. Improve security
Given the basic ER and relational models, which of the following is INCORRECT?	1. An attributes of an entity can have more that one value 2. An attribute of an entity can be composite <b>3. In a row of a relational table, an attribute can have more than one value</b> 4. In a row of a relational table, an attribute can have exactly one value or a NULL value
Foreign Key is	<b>1. A field in a table that matches a key field in another table</b> 2. A field in a table that contains data that is also contained elsewhere in another table 3. A key that consists of more than one field 4. A field in a table that has the same name as a key field in another table

In a conceptual model for a university, which of the following could most appropriately be represented via a recursive relationship?	1. Student credit hours <b>2. Course prerequisites</b> 3. Parking sticker assignments 4. Final exam schedules
Which of the following most certainly implies the need for an entire table to implement?	1. A binary relationship 2. A ternary relationship 3. A recursive relationship <b>4. An identifying relationship</b>
_____ produces the relation that has attributes of R1 and R2	<b>1. Cartesian product</b> 2. Difference 3. Intersection 4. Product
A relation R is said to be in 2NF when it does not have	<b>1. Partial Dependencies</b> 2. Transitive Dependencies 3. Multivalued Attributes 4. Both Partial dependencies and Multivalued Dependencies
Two sets of functional dependencies E and F are equivalent if $E^+ = F^+$ .This statement is	<b>1. True</b> 2. False
	3. Cant Say 4.

Cartesian product in relational algebra is	1. a Unary operator 2. <b>a Binary operator</b> 3. a Ternary operator 4. not defined
How will you handle the overflow condition of a linked queue through code(note: new_node is a newly created node in a memory)	<b>1.if(rear==size)</b> 2.if(new_node==0) 3.if(front==size)4.if(new_node==null)
What is NOT part of the design process	1. Architectural design 2. Database design 3. Component design <b>4. Validation testing</b>
Which of the following is not a part/product of requirements engineering?	1. Feasibility study 2. Requirements validation 3. System models <b>4. Architectural design</b>

The number of auxiliary memory required for a Push Down Machine (PDM) to behave like a Finite State Machine (FSM) is	<p><b>1. 0</b></p> <p>2. 2</p> <p>3. 4</p> <p>4. 1</p>
In reuse-oriented software engineering the last stage is _____.	<p>1. component analysis</p> <p>2. requirements modification</p> <p><b>3. system validation</b></p> <p>4. system design</p>
Thrashing occurs _____	<p><b>1. when excessive swapping takes place</b></p> <p>2. when you thrash your computer</p> <p>3. whenever deadlock occurs</p> <p>4. when no swapping takes place</p>
<pre>#include int main () { static int a[]={10, 20, 30 40, 50}; static int *p[]={a, a+3, a+4, a+1, a+2}; int **ptr=p; ptr++; printf ("%d%d", ptr p, **ptr); } The output of the program is _____</pre>	<p>1. 43</p> <p><b>2. 140</b></p> <p>3. 89</p> <p>4. 78</p>
In CMM, the life cycle activities of requirements analysis, design, code, and test are described in	<p><b>1. Software Product Engineering</b></p> <p>2. Software Quality Assurance</p> <p>3. Software Subcontract Management</p> <p>4. Software Quality Management</p>

<p>A set of documents in which a given document can contain text, graphics video and audio clips as well as embedded references to other documents world wide web pages are called as -----</p>	<ol style="list-style-type: none"> <li>1. Hypermedia message</li> <li>2. Hypertext document</li> <li><b>3. Hypermedia Documents</b></li> <li>4. Path rectangular grid of Pixels</li> </ol>
<p>Which of the following is not one of the principles of good coding?</p>	<ol style="list-style-type: none"> <li>1. Create unit tests before you begin coding</li> <li>2. Create a visual layout that aids understanding</li> <li>3. Keep variable names short so that code is compact</li> <li><b>4. Write self-documenting code, not program documentation</b></li> </ol>
<p>Mnemonic codes and variable names are used in</p>	<ol style="list-style-type: none"> <li>1. Machine language</li> <li><b>2. Assembly language</b></li> <li>3. high level language</li> <li>4. Used nowhere</li> </ol>
<p>Consider the following</p> <pre>statements var text = "testing: 1, 2, 3"; // Sample text  var pattern = /\d+/g // Matches all instances of one or more digits  In order to check if the pattern matches with the string "text", the statement is</pre>	<ol style="list-style-type: none"> <li>1. <code>text==pattern</code></li> <li>2. <code>text.equals(pattern)</code></li> <li>3. <code>text.test(pattern)</code></li> <li><b>4. <code>pattern.test(text)</code></b></li> </ol>



<p>Consider the following javascript statements</p> <pre> x = ~y;  w = x = y = z; q = a?b :c?d :e?f :g; </pre> <p>The above code snippet is equivalent to:</p>	<p>1. <code>x = ~(-y); w = (x = (y = z)); q = a?b:(c?d:(e?f:g));</code></p> <p>2.</p> <p><code>x = a?b:(c?d:(e?f:g)); q = ~(-y); w = (x = (y = z));</code></p> <p>3.</p> <p><code>x = (x = (y = z));w = ~(-y); q = a?b:(c?d:(e?f:g));</code></p> <p><b>4. <code>x = ~(-y); w = (x = (y = z)); q = (c?d:(e?f:g));</code></b></p>
<p>The javascript statement <code>a===b</code> refers to</p>	<p>1. Both a and b are equal in value, type and reference address</p> <p>2. Both a and b are equal in value</p> <p><b>3. Both a and b are equal in value and type</b></p> <p>4. There is no such statement</p>
<p>Which of these methods has no restrictions on content size when a form is submitted.</p>	<p>1. GET</p> <p>2. HEAD</p> <p><b>3. POST</b></p> <p>4. PUT</p>

<p>Consider the following program:</p> <pre> int f(int *p, int n) { if (n &lt;= 1) return 0; else return max ( f (p+1, n-1),p[0]-p[1]); } int main() { int a[] = {3,5,2,6,4}; printf("%d", f(a,5)); } </pre> <p>The value printed by this program is</p>	<p>1. 1</p> <p>2. 2</p> <p><b>3. 3</b></p> <p>4. 4</p>
<p>The while loop is referred to as a(n) _____ loop because the loop condition is tested at the beginning of the loop</p>	<p>1. priming</p> <p><b>2. pretest</b></p> <p>3. initial</p> <p>4. beginning</p>
<p>The word case used in the switch statement represents a</p>	<p>1. global variable in the C++ language</p> <p>2. function in the C++ language</p> <p><b>3. keyword in the C++ language</b></p> <p>4. data type in the C++ language</p>
<p>Teams using agile software practices never create models.</p>	<p>1. TRUE</p> <p><b>2. FALSE</b></p> <p>3. 4.</p>
<p>In HTTP pipelining</p>	<p><b>1. multiple HTTP requests are sent on a single TCP connection without waiting for the corresponding responses</b></p> <p>2. multiple HTTP requests can not be sent on a single TCP connection</p> <p>3. multiple HTTP requests are sent in a queue on a single TCP connection</p> <p>4. none of the mentioned</p>

HTTP client requests by establishing a _____ connection to a particular port on the server.	<ol style="list-style-type: none"> <li>1. user datagram protocol</li> <li>2. transmission control protocol</li> <li>3. broader gateway protocol</li> <li>4. RIP</li> </ol>
FTP server listens for connection on port number	<ol style="list-style-type: none"> <li>1. 20</li> <li>2. <b>21</b></li> <li>3. 22</li> <li>4. 23</li> </ol>
In FTP protocol, client contacts server using _____ as the transport protocol.	<ol style="list-style-type: none"> <li>1. <b>transmission control protocol</b></li> <li>2. user datagram protocol</li> <li>3. datagram congestion control protocol</li> <li>4. stream control transmission protocol</li> </ol>
Arrange the operators according to their precedence: +, %, >, =	<ol style="list-style-type: none"> <li>1. <b>&gt;, %, +, =</b></li> <li>2. =, +, %, -&gt;</li> <li>3. %, +, =, -&gt;</li> <li>4. %, -&gt;, =, +</li> </ol>
The file transfer protocol is built on	<ol style="list-style-type: none"> <li>1. data centric architecture</li> <li>2. service oriented architecture</li> <li>3. <b>client server architecture</b></li> <li>4. peer to peer architecture</li> </ol>

Which one of the following is used as the start frame delimiter in ethernet frame?	1. 10101010 <b>2. 10101011</b> 3. 00000000 4. 11111111
The entity relationship diagram	<b>1. depicts relationships between data objects</b> 2. depicts functions that transform the data flow 3. indicates how data are transformed by the system 4. indicates system reactions to external events
Which of the following is not an example of infrastructure components that may need to be integrated into the software architecture?	1. Communications components <b>2. Database components</b> 3. Interface components 4. Memory management components
Pick an incorrect declaration: 1. int x[5]; 2. int x[5]={1,2,3,4,5}; 3. int x[5] = {1,2} 4. int x[];	1. 1 2. 2 3. 3 <b>4. 4</b>
Which one of the following correctly describes the meaning of 'namespace' feature in C++?	<b>1.namespaces provide facilities for organizing the names in a program to avoid name clashes</b> 2.Namespaces refer to space between the names in a program 3.Namespaces refer to the memory space allocated for names used in a program 4.Namespaces refer to the space for names.
Which of the following is false for cin?	<b>1.It is a class of which stream is an object.</b> 2.Using cin, the data can be read from user's terminal. 3.It represents standard input. 4.It is an object of istream class.
The members of a class, by default, are	<b>1.private</b> 2.protected 3.public 4.mandatory to specify

Which of the following statements is NOT valid about operator overloading?	1. Overloaded operator must have at least one operand of its class type. 2. Only existing operators can be overloaded. 3. The overloaded operators follow the syntax rules of the original operator. <b>4. The arity of the operator can be changed</b>
If the class name is X, what is the type of its "this" pointer?	1. X* 2. const X* 3. <b>X&amp;</b> 4. X* const
If a constructor function is defined in private section of a class, then	1. The object cannot be created <b>2. Only its member functions and friends may declare objects of the class</b> 3. Only its friends may declare objects of the class 4. Only its member functions may declare objects of the class
Which of the following operator can be overloaded through friend function?	1. -> 2. = 3. ( ) <b>4. *</b>
Many of the tasks from the generic task sets for analysis modeling and design can be conducted in parallel with one another.	<b>1. TRUE</b> 2. FALSE 3. 4.
The system engineering process usually begins with the	1. detailed view 2. domain view 3. element view <b>4. world view</b>
A process executes the code fork (); fork (); fork (); The total number of child processes created is	1. 3 2. 4 <b>3. 7</b> 4. 8

If class A is friend of class B and if class B is friend of class C, which of the following is true?	1. Class C is friend of Class A 2. Class A is friend of Class C <b>3. Class A and Class C don't have any friend relationship</b> 4. Class A and Class C are mutual friends
By following modern system engineering practices simulation of reactive systems is no longer necessary.	1. True <b>2. FALSE</b> 3. 4.
Which of the following (in file scope) leads to a compiletime error?	1. const int a=90; 2. const int f1() { return 100; } <b>3. int f2() const { return 200; }</b> 4. const int f3( const int i) { return 300;}
The default copy constructor performs	1. Deep Copy <b>2. Shallow Copy</b> 3. Soft Copy 4. Hard Copy
which of the following is an incorrect definition inside a class ?	1. void * operator new(size_t size) { } <b>2. void * operator new () { }</b> 3. void operator delete(void * ptr) { } 4. int operator ++() { }
Which is the correct CSS syntax?	1. body:color=black 2. {body;color:black} 3. {body:color=black{body} <b>4. body {color: black}</b>
To link your Web page to a style sheet, you must use the _____ tag	1. <STYLESHEET> 2. <STYLE> <b>3. &lt;link&gt;</b> 4. <web>
What does the following bit of JavaScript print out?  var a = [1,,3,4,5]; console.log([a[4], a[1], a[5]]);	<b>1. 5, undefined,undefined</b> 2. 5,3,undefined 3. 5,0,undefined 4. 5,null,undefined
Usually a pure virtual function	1. Will be called only to delete an object <b>2. Is defined only in derived class</b> 3. Will never be called 4. Has complete function body

Which of the following is not the characteristic of constructor?	1.They should be declared in the public section. 2.They do not have return type. 3.They can not be inherited. <b>4.They can be virtual.</b>
How many instances of an abstract class can be created?	1.13 2.5 3.1 <b>4.0</b>
What will be the result of the expression 13 & 25	1.25 2.38 <b>3.9</b> 4.12
In which case is it mandatory to provide a destructor in a class?	1.Class for which copy constructor is defined 2.Class for which two or more than two objects will be created 3.Almost in every class <b>4.Class whose objects will be created dynamically</b>
If we create a file by 'ifstream', then the default mode of the file is _____	<b>1.ios :: out</b> 2.ios :: in 3.ios :: app 4.ios :: binary
overloading + operator requires return type as object because,	1.reference parameter has to be returned 2.binary addition requires that <b>3.all overloading functions require that</b> 4.chain of additions
To create an alias Objects have to be passed by	1.address <b>2.reference</b> 3.value 4.field by field
During business process engineering, three different architectures are examined	<b>1. applications, data, technology infrastructure</b> 2. communications, organization, financial infrastructure 3. network, database, reporting structure 4. systems, requirements, data structure
The goal of product engineering is to translate the customer's desire for a set of defined capabilities into a working product.	<b>1. TRUE</b> 2. FALSE 3. 4.

<p>The architecture components for product engineering are</p>	<ol style="list-style-type: none"> <li>1. data, hardware, software, people</li> <li>2. data, documentation, hardware, software</li> <li>3. data, hardware, software, procedures</li> <li>4. documentation, hardware, people, procedures</li> </ol>
<p>The following HTML _____ element contains meta data which is not displayed inside the document</p>	<ol style="list-style-type: none"> <li>1. &lt;form&gt;</li> <li>2. &lt;title&gt;</li> <li>3. &lt;table&gt;</li> <li>4. &lt;frame&gt;</li> </ol>
<p>The system specification describes the</p>	<ol style="list-style-type: none"> <li>1. Function, performance and constraints of a computer-based system</li> <li>2. implementation of each allocated system</li> <li>3. element software architecture</li> <li>4. time required for system simulation</li> </ol>



<p>The best way to conduct a requirements validation review is to</p>	<ol style="list-style-type: none"> <li>1. examine the system model for errors</li> <li>2. have the customer look over the requirements</li> <li>3. send them to the design team and see if they have any concerns</li> <li>4. use a checklist of questions to examine each requirement</li> </ol>
<p>A stakeholder is anyone who will purchase the completed software system under development.</p>	<ol style="list-style-type: none"> <li>1. TRUE</li> <li>2. False</li> <li>3.</li> <li>4.</li> </ol>
<p>The job of the requirements engineer is to categorize all stakeholder information in a way that allows decision makers to choose an internally consistent set of requirements.</p>	<ol style="list-style-type: none"> <li>1. True</li> <li>2. False</li> <li>3.</li> <li>4.</li> </ol>
<p>The nature of collaboration is such that all system requirements are defined by consensus of a committee of customers and developers.</p>	<ol style="list-style-type: none"> <li>1. TRUE</li> <li>2. FALSE</li> <li>3. 4.</li> </ol>

High speed ethernet works on	1. coaxial cable 2. twisted pair cable <b>3. optical fiber</b> 4. none of the mentioned
Which of these will create a shuffled list?	<b>1. &lt;ol&gt;</b> 2. <ul> 3. <dl> 4. Nested list
<h2 style="color:blue">I am Blue</h2> is _____ way of styling HTML elements	1. Internal Style <b>2. Inline Style</b> 3. External Style 4. Default

In collaborative requirements gathering, the facilitator	<ol style="list-style-type: none"> <li>1. cannot be a member of the software team</li> <li>2. cannot be a customer</li> <li><b>3. controls and facilitates the process</b></li> <li>4. must be an outsider</li> </ol>
The maximum size of payload field in ethernet frame is	<ol style="list-style-type: none"> <li>1. 1000 bytes</li> <li>2. 1200 bytes</li> <li>3. 1300 bytes</li> <li><b>4. 1500 bytes</b></li> </ol>
What is interframe gap?	<ol style="list-style-type: none"> <li><b>1. idle time between frames</b></li> <li>2. idle time between frame bits</li> <li>3. idle time between packets</li> <li>4.</li> </ol>
	none of the mentioned
The following HTML element helps making animated text	<ol style="list-style-type: none"> <li>1. &lt;em&gt;</li> <li>2. &lt;ins&gt;</li> <li>3. &lt;mark&gt;</li> <li><b>4. &lt;marquee&gt;</b></li> </ol>
	<ol style="list-style-type: none"> <li>1. size of the budget</li> </ol>

The work products produced during requirement elicitation will vary depending on the	<p>2. <b>size of the product being built</b></p> <p>3. software process being used</p> <p>4. stakeholders needs</p>
What is cell padding?	<p>1. <b>Used to separate cell walls from their contents</b></p> <p>2. Used to set space between cells</p> <p>3. Used to provide width to a cell</p> <p>4. Used to merge two cells</p>
What is the correct HTML for making a text input field?	<p>1. <b>&lt;input type="text"&gt;</b></p> <p>2. &lt;textfield&gt;</p> <p>3. &lt;input type="textfield"&gt;</p> <p>4. &lt;textinput type="text"&gt;</p>
HTTP is implemented over	<p>1. UDP</p> <p>2. <b>TCP</b></p> <p>3. SMTP</p> <p>4. POP</p>
An ethernet frame that is less than the IEEE 802.3 minimum length of 64 octets is called	<p>1. short frame</p> <p>2. <b>runt frame</b></p> <p>3. mini frame</p> <p>4. man frame</p>
In win-win negotiation, the customer's needs are met even though the developer's need may not be.	<p>1. TRUE</p> <p>2. <b>FALSE</b></p> <p>3. 4.</p>

<p>Consider the following program in C language:</p> <pre>#include main() { int i; int *pi = &amp;i; scanf("%d",&amp;pi); printf("%d\n", i+5); }</pre> <p>Which one of the following statements is TRUE?</p>	<ol style="list-style-type: none"> <li>1. Compilation fails.</li> <li>2. Execution results in a run-time error.</li> <li>3. On execution, the value printed is 5 more than the address of variable i</li> <li>4. On execution, the value printed is 5 more than the integer value entered</li> </ol>
<p>_____ is used to define a special CSS style for a group of HTML elements</p>	<ol style="list-style-type: none"> <li>1. Class attribute</li> <li>2. name attribute</li> <li>3. group attribute</li> <li>4. id attribute</li> </ol>
<p>Which of these is a stand alone tag?</p>	<ol style="list-style-type: none"> <li>1. form</li> <li>2. frame</li> <li>3. table</li> <li>4. anchor</li> </ol>
<p>The following HTML element is used to display horizontal line</p>	<ol style="list-style-type: none"> <li>1. &lt;br&gt;</li> <li>2. &lt;h&gt;</li> <li>3. &lt;hr&gt;</li> <li>4. &lt;h2&gt;</li> </ol>

The _____ attribute defines the action to be performed when the form is submitted	1. method attribute <b>2. action attribute</b> 3. onSubmit attribute 4. onClick attribute
Which attribute is used to extend the lifetime of a cookie?	1. higher-age 2. increase-age <b>3. max-age</b> 4. lifetime
How can you make a list that lists the items with numbers?	1. <list> 2. <b>&lt;ol&gt;</b> 3. <dl> 4. <ul>
Which method is used to get the year of a date object in YYYY format in Javascript.	1. getYear() 2. getYYYYY() <b>3. getFullYear()</b> 4. get4Year()

Which one of the following is a cryptographic protocol used to secure HTTP connection?	1. Stream Control Transmission Protocol (SCTP). 2. <b>Transport Layer Security (TLS).</b> 3. Explicit Congestion Notification (ECN). 4. Resource Reservation Protocol.
In HTTP, which method gets the resource as specified in the URI	1. GET 2. POST 3. <b>PUT</b> 4. TRACE
Which of these is not a valid attribute of <tr> element?	1. valign 2. bgcolor 3. align 4. <b>rowspan</b>
Java package is a grouping mechanism with the purpose of	1. Providing the library for the Java program 2. <b>Controlling the visibility of the classes, interfaces and methods</b> 3. Replacing header file used in C/C++ 4. An application framework

<p>Consider the C function given below.</p> <pre> int f(int j) {     static int i;     i = 50;     if (i == j)     {         printf("something");         k = f(i);         return 0;     }     else return 0; } </pre> <p>Which one of the following is TRUE?</p>	<ol style="list-style-type: none"> <li>1. The function returns 0 for all values of j.</li> <li>2. The function prints the string something for all values of j.</li> <li>3. The function returns 0 when j = 50.</li> <li>4. The function will exhaust the runtime stack or run into an infinite loop when j = 50.</li> </ol>
<p>Use of _____ allows for some processes to be waiting on I/O while another process executes.</p>	<ol style="list-style-type: none"> <li>1. multiprogramming</li> <li>2. multiuser interfacing</li> <li>3. Random scheduling</li> <li>4. Variable cpu cycles</li> </ol>



_____ OS pays more attention on the meeting of the time limits.	1. Distributed 2. Network <b>3. Real time</b> 4. Desktop
The purpose of a TLB is	1. To cache page translation information <b>2.</b> <b>To cache frequently used data</b> 3. To hold register values while a process is waiting to be run 4. To hold the start and length of the page table
For automatic objects, constructors and destructors are called each time the objects _____	<b>1. enter and leave scope</b> 2. inherit parent class 3. are constructed 4. are destroyed

Which of the following statement is correct about destructors?	<p>1. A destructor has void return type.</p> <p>2. A destructor has integer return type.</p> <p><b>3. A destructor has no return type.</b></p> <p>4. A destructors return type is always same as that of main()</p>
Given a variable \$email containing the string user@example.com, which of the following PHP statements would extract the string example.com?	<p>1. substr(\$email, strpos(\$email, "@"));</p> <p>2. strstr(\$email, "@");</p> <p>3. strchr(\$email, "@");</p> <p><b>4. substr(\$email, strpos(\$email, "@")+1);</b></p>
<p>Consider the code snippet</p> <p>given below</p> <pre>var count = [1,,3];</pre> <p>What is the observation made?</p>	<p><b>1. The omitted value takes "undefined"</b></p> <p>2. This results in an error</p> <p>3. This results in an exception</p> <p>4. Can't predict</p>
<p>Consider the following code snippet</p> <pre>var a1 = [, ,]; var a2 = new Array(3);</pre> <p>0 in a1</p> <p>0 in a2</p> <p>Result of Javascript is:</p>	<p><b>1. true false</b></p> <p>2. false true</p> <p>3. true true</p> <p>4. false true</p>
The pop() method of the array in javascript does which of the following task ?	<p><b>1. decrements the total length by 1</b></p> <p>2. increments the total length by 1</p> <p>3. prints the first element but no effect on the length</p> <p>4. don't return the value of deleted element</p>

When there is an indefinite or an infinity value during an arithmetic value computation, javascript	<ol style="list-style-type: none"> <li>1. Prints an exception error</li> <li>2. Prints an overflow error</li> <li><b>3. Displays "Infinity"</b></li> <li>4. Prints the value as such</li> </ol>
Given a comma-separated list of values in a string, which function from the given list can create an array of each individual value with a single call in PHP?	<ol style="list-style-type: none"> <li>1. strstr( )</li> <li>2.       extract</li> <li><b>3.       explode( )</b></li> <li>4. strtok( )</li> </ol>
In PHP, array values are keyed by _____ values (called indexed arrays) or using _____ values (called associative arrays). Of course, these key methods can be combined as well.	<ol style="list-style-type: none"> <li>1. Float, string</li> <li>2. Positive number, negative number</li> <li>3. String, Boolean</li> <li><b>4. Integer, String</b></li> </ol>

<p>What will the following script output?</p> <pre>&lt;?php \$array = array (1, 2, 3, 5, 8, 13, 21, 34, 55); \$sum = 0; for (\$i = 0; \$i &lt; 5; \$i++) {     \$sum += \$array[\$array[\$i]]; } echo \$sum; ?&gt;</pre>	<p>1. <b>78</b></p> <p>2. 19</p> <p>3. NULL</p> <p>4. 5</p>
<p>What elements will the following script output?</p> <pre>&lt;?php \$array = array (true =&gt; 'a', 1 =&gt; 'b'); var_dump(\$array); ?&gt;</pre>	<p>1. 1 =&gt; 'b'</p> <p>2. True =&gt; 'a', a =&gt; 'b'</p> <p>3. <b>NULL</b></p> <p>4. 0 =&gt; 'a', 1 =&gt; 'b'</p>
<p>Assume you would like to sort an array in ascending order by value while preserving key associations. Which of the following PHP sorting functions would you use?</p>	<p>1. ksort( )</p> <p>2. <b>asort( )</b></p> <p>3. krsort( )</p> <p>4. sort( )</p>
<p>If a university sets up web-based information system that faculty could access to record student grades and to advise students, that would be an example of an</p>	<p>1. <b>intranet</b></p> <p>2. ERP</p> <p>3. extranet</p> <p>4. CRM</p>
<p>Which of the following gives the memory address of a variable pointed to by pointer a?</p>	<p>1. a;</p> <p>2. *a;</p> <p>3. <b>&amp;a;</b></p> <p>4. address(a);</p>

A default constructor is one that	<ol style="list-style-type: none"> <li>1. <b>that takes all default arguments</b></li> <li>2. have to be called explicitly</li> <li>3. gets called automatically</li> <li>4. does take many parameters</li> </ol>
A constructor without any arguments is	<ol style="list-style-type: none"> <li>1. <b>default constructor</b></li> <li>2. parameterized constructor</li> <li>3. none</li> <li>4. overloading</li> </ol>
Which of the following functions compares two strings?	<ol style="list-style-type: none"> <li>1. compare();</li> <li>2. cmp();</li> <li>3. stringcompare();</li> <li>4. <b>strcmp();</b></li> </ol>
A class is a	<ol style="list-style-type: none"> <li>1. Structure</li> <li>2. Memory</li> <li>3. <b>Template</b></li> <li>4. Function</li> </ol>
class n{ public: int *a;}o,p; assigning o=p is called?	<ol style="list-style-type: none"> <li>1. deep copy</li> <li>2. <b>shallow copy</b></li> <li>3. error</li> <li>4. constructor</li> </ol>
Templates improve	<ol style="list-style-type: none"> <li>1. inheritance</li> <li>2. <b>reusability</b></li> <li>3. class</li> <li>4. functions</li> </ol>

Access to private data is	<p>1. <b>Restricted to methods of the same class</b></p> <p>2. Restricted to methods of other classes</p> <p>3. Available to methods of the same class and other classes</p> <p>4. Not an issue because the program will not compile</p>
<p>A priority queue is implemented as a Max-Heap. Initially, it has 5 elements. The level-order traversal of the heap is: 10, 8, 5, 3, 2.</p> <p>Two new elements 1 and 7 are inserted into the heap in that order. The level-order traversal of the heap after the insertion of the elements is:</p>	<p>1. <b>10, 8, 7, 3, 2, 1, 5</b></p> <p>2. 10, 8, 7, 2, 3, 1, 5</p> <p>3. 10, 8, 7, 1, 2, 3, 5</p> <p>4. 10, 8, 7, 5, 3, 2, 1</p>
For the array (77, 62, 114, 80, 9, 30, 99), write the order of the elements after two passes using the Radix sort	<p>1. 80 30 62 114 77 9 99</p> <p>2. 114 30 62 77 9 99</p> <p>3. <b>9 114 30 62 77 80 99</b></p> <p>4. 9 30 62 77 80 99 114</p>
<p>Consider a B+ tree in which the search Answer is 12 bytes long, block size is 1024 bytes, record pointer is 10 bytes long and block pointer is 8 bytes long. The maximum number of keys that can be accommodated in each non-leaf node of the tree is ____</p>	<p>1. 40</p> <p>2. <b>50</b></p> <p>3. 60</p> <p>4. 70</p>

<p>The number of ways in which the numbers 1, 2, 3, 4, 5, 6, 7 can be inserted in an empty binary search tree, such that the resulting tree has height 6, is</p>	<p>1. 63</p> <p>2. <b>64</b></p> <p>3. 65</p> <p>4. 66</p>
<p>What is the maximum size of data that the application layer can pass on to the TCP layer below?</p>	<p>1. <b>Any size</b></p> <p>2. <math>2^{16}</math> bytes-size of TCP header</p> <p>3. <math>2^{16}</math> bytes</p> <p>4. 1500 bytes</p>
<p>Consider an undirected graph G where self-loops are not allowed. The vertex set of G is <math>\{(i, j): 1 \leq i \leq 12, 1 \leq j \leq 12\}</math>. There is an edge between (a, b) and (c, d) if <math> a - c  = 1</math> and <math> b - d  = 1</math>. The number of edges in this graph is</p>	<p>1. 505</p> <p>2. <b>506</b></p> <p>3. 507</p> <p>4. 508</p>
<p>Consider the following New-order strategy for traversing a binary tree:</p> <p>1)Visit the root;</p> <p>2)Visit the right subtree using New-order;</p> <p>3)Visit the left subtree using New-order; The New-order traversal of the expression tree corresponding to the reverse polish expression <math>3\ 4\ *\ 5\ -\ 2\ ?\ 6\ 7\ *\ 1\ +\ -</math> is given by:</p>	<p>1. <math>+ - 1\ 6\ 7\ *\ 2\ ?\ 5\ -\ 3\ 4\ *</math></p> <p>2. <math>. - + 1\ *\ 6\ 7\ ?\ 2\ -\ 5\ *\ 3\ 4</math></p> <p>3. <b><math>- + 1\ *\ 7\ 6\ ?\ 2\ -\ 5\ *\ 4\ 3</math></b></p> <p>4. <math>. 1\ 7\ 6\ *\ +\ 2\ 5\ 4\ 3\ *\ -\ ? -</math></p>
<p>A complete binary min-heap is made by including each integer in <math>[1;1023]</math> exactly once. The depth of a node in the heap is the length of the path from the root of the heap to that node. Thus, the root is at depth 0. The maximum depth at which integer 9 can appear is</p>	<p>1. 7</p> <p>2. <b>8</b></p> <p>3. 9</p> <p>4. 10</p>

_____ has a dedicated communication path between stations	<b>1.Circuit switching</b> 2.Frame relay 3.Packet switching 4.ATM
What is the order of the stages in the waterfall mode?	<b>1. Requirements Definition, System &amp; Software Design, Implementation &amp; Unit Testing, Integration &amp; System Testing, Operation &amp; Maintenance.</b> 2. Requirements Definition, Integration & System Testing, System & Software Design, Implementation & Unit Testing, Operation & Maintenance. 3. System & Software Design, Requirements Definition, Operation & Maintenance, Implementation & Unit Testing, Integration & System Testing. 4. Implementation & Unit Testing, Requirements Definition, System & Software Design, Integration & System Testing, Operation & Maintenance.
_____ is an initial version of a software system that is used to demonstrate concepts, try out design options, and find out more about the problem and its possible solutions.	<b>1. Prototype</b> 2. Architectural Design 3. Subsystem 4. Module
_____ messages are typically used for diagnostic or control purposes or generated in response to errors in IP operations.	<b>1.ICMP</b> 2.TCP 3.UDP 4.IP
_____ appends to the address a slash character and the decimal number of leading bits of the routing prefix.	<b>1.CIDR</b> 2.TCP 3.UDP 4.IP
_____ algorithm is used for the flow control of data between sender and receiver.	1.Dijkstra 2.RIP 3.Leaky bucket <b>4.Go Back N</b>



_____ cryptography refers to encryption methods in which both the sender and receiver share the same key.	1.Symmetric 2.Asymmetric 3.Ceaser key 4.Asymmetric key
_____ is responsible for the final encapsulation of higherlevel messages into frames that are sent over the network using the physical layer.	1.Data link layer 2.Network layer 3.Application layer 4.Session layer
The switching method fixes the path from source to destination is _____	1.circuit switching 2.Message Switching 3.Packet switching 4.Frame Relay
There is no connection setup phase in _____	1.Frame relay 2.Virtual Circuit Switching 3.Datagram 4.ATM
Which of these is not an element of an object-oriented analysis model?	1. Behavioral elements 2. Class-based elements 3. Data elements 4. Scenario-based elements
_____ gives the number of bits that can be transmitted over a network in a fixed time period.	1.Latency 2.Jitter 3.Bandwidth 4.Delay
Overloading a prefix increment operator by means of a member function takes	1. Three arguments 2. Two arguments 3. No argument 4. One argument
_____ is assigned to an organization by a global authority.	1.Subnet ID 2.Supernet ID 3.Host ID 4.Network ID
_____ should keep track of multiple file downloads requested by a particular FTP application, or multiple telnet connections from a single terminal client, or web page retrievals from a web server.	1.Transport layer 2.Application layer 3.Presentation layer 4.Session layer
Which of the following ways are legal to access a class data member using this pointer?	1. this.x 2. *this.x 3. this->x 4. *this-x

Class ____ IP addresses are used for large organizations	1.A 2.B 3.D 4.C
Which one of the following is the correct way to declare a pure virtual function?	1. virtual void Display(void){0}; 2. void Display(void) = 0; 3. <b>virtual void Display(void) = 0;</b> 4. virtual void Display = 0;
Simple network management protocol (SNMP) is implemented with a daughter board in	1.the nodes 2.the server 3.the hubs 4.a separate PC that managers the network
which of the following is an incorrect definition inside a class ?	1. <b>void * operator new () { }</b> 2. int operator ++() { } 3. void operator delete(void * ptr) { } 4. void * operator new(size_t size) { }
Which of the following results in a compile-time error?	1. int f2() { static int i; i++; return i; } 2. int f3( static int i) { return 300;} 3. <b>static int f1() { return 100; }</b> 4. static int a;
A view is a	1. <b>virtual table</b> 2. subset of the table 3. base table 4. super table
The state diagram	1. depicts relationships between data objects 2. depicts functions that transform the data flow 3. indicates how data are transformed by the system 4. <b>indicates system reactions to external events</b>

Passing the request from one schema to another in DBMS architecture is called as _____	<b>1. Mapping</b> 2. Communication 3. Relational 4. network
If every node u in G adjacent to every other node v in G, A graph is said to be _____	1. isolated <b>2. complete</b> 3. finite 4. strongly connected
The BIU contains FIFO register of size _____ bytes	1. 8 <b>2. 6</b> 3. 4 4. 12
The BIU prefetches the instruction from memory and store them in _____	<b>1. queue</b> 2. register 3. memory 4. stack
The 1 MB byte of memory can be divided into _____ segment	1. 1 Kbyte <b>2. 64 Kbyte</b> 3. 33 Kbyte 4. 34 Kbyte

The IP is _____ bits in length	1. 8 bits 2. 4 bits 3. 16 bits <b>4. 32 bits</b>
IMUL source is a signed _____	<b>1. multiplication</b> 2. addition 3. subtraction 4. division
The microprocessor determines whether the specified condition exists or not by testing the _____	1. carry flag <b>2. conditional flag</b> 3. common flag 4. sign flag
In max mode, control bus signal So,S1 and S2 are sent out in _____ form	1. shared 2. decoded <b>3. encoded</b> 4. unshared
The ____ bus controller device decodes the signals to produce the control bus signal	1. internal 2. data 3. <b>external</b> 4. address

To interface memory with the microprocessor, connect register the lines of the address bus must be added to address lines of the _____ chip.	1. single <b>2. memory</b> 3. multiple 4. triple
In which year, 8086 was introduced?	<b>1. 1978</b> 2. 1979 3. 1977 4. 1981
Data flow testing is a control structure testing technique where the criteria used to design test cases is that they	<b>1. rely on basis path testing</b> 2. exercise the logical conditions in a program module 3. select test paths based on the locations and uses of variables 4. focus on testing the validity of loop constructs
Loop testing is a control structure testing technique where the criteria used to design test cases is that they	1. rely basis path testing 2. exercise the logical conditions in a program module 3. select test paths based on the locations and uses of variables <b>4. focus on testing the validity of loop constructs</b>
Boundary value analysis can only be used to do white-box testing.	1. true <b>2. false</b> 3. 4.

Which of the following acts as a heterogeneous system?	1. Mixture of air and water system 2. Mixture of water and steam 3. Solution of ammonia in water 4. Mixture of octane and heptane
For liquid water in equilibrium with a mixture of water vapour and nitrogen, the number of degrees of freedom is	1. 0 2. 1 3. 2 4. 3
The critical coefficient ( $RT_c/P_cV_c$ ) for all gases obeying VanderWaals equation of state is equal to	1. $3/8$ 2. $8/3$ 3. $5/2$ 4. $2/5$
An equimolar mixture of benzene and toluene is contained in a piston/cylinder arrangement at a temperature T. What is the maximum pressure below which the mixture exists as a vapour phase alone? At the given T, the vapour pressure of benzene and toluene are 765 and 320 mm Hg respectively. Assume Raoult's law is valid.	1. 451.2 mm Hg 2. 456.2 mm Hg 3. 466.2 mm Hg 4. 481.2 mm Hg
At a given temperature the volume of a gas dissolved in a solvent _____ with increase in pressure	1. Increases 2. Decreases 3. Remains unchanged 4. Uncertain
If vapour pressure at two temperatures of a solid phase in equilibrium with its liquid phase are known, then latent heat of fusion can be calculated by	1. Maxwell's equation 2. Clayperon-Claussius equation 3. Vander Waals equation 4. Nernst Heat Theorem
When water is heated from 2 °C to 4 °C, it	1. Expands 2. Contracts 3. Density remains the same 4. Volume remains the same
What is the mole fraction of methane, $x_1$ , dissolved in a light oil at 200K and 25 bar? Henry's law is valid for the liquid phase and gas may be assumed to be an ideal	

<p>solution. Data: At this condition Henry's law constant for methane in oil is 250 bar, fugacity coefficient of pure methane gas is 0.90 at <math>y = 0.95</math> mole fraction of methane in gas phase.</p>	<p>1.0.0655 2.0.0755 3.0.0855 4.0.0955</p>
<p>At a given temperature <math>k_1</math>; <math>k_2</math> and <math>k_3</math> are the equilibrium constants for the following reaction respectively</p> <p>Then <math>k_1</math>; <math>k_2</math>; and <math>k_3</math> are related as</p>	<p>1. <math>k_3 = k_1 * k_2</math></p> <p>2. <math>k_3 = (k_1 * k_2)^{0.5}</math></p> <p>3. <math>k_3 = (k_1 * k_2)^2</math></p> <p>4. <math>k_3 = \text{sqrt}(k_1 * k_2)</math></p>
<p>Match the followings and select correct answer from the codes given below the lists</p>	<p>1.</p> <p>A - 3; B - 1; C- 2; D - 4 2.</p> <p>A - 2; B - 3; C- 4; D - 1 3.</p> <p>A - 4; B - 1; C- 2; D - 3 4.</p> <p>A - 1; B - 2; C- 4; D - 3</p>
<p>A methanol-water vapor liquid system is at equilibrium at 60°C and 60 kPa. The mole fraction of methanol in liquid is 0.5 and in vapor is 0.8. Vapor pressure of methanol and water at 60°C are 85 kPa and 20 kPa respectively. Assuming vapor phase to be an ideal gas mixture, what is the activity coefficient of water in the liquid phase ?</p>	<p>1.</p> <p>0.3</p> <p>2.1.2 3.</p> <p>1.6</p> <p>4.</p> <p>7.5</p>

<p>A mixture of A and B conforms closely to Raoult's law. The pure component vapour pressures at <math>T^{\circ}\text{C}</math> are given by</p> <p>If the bubble point of a certain mixture of A and B is <math>80^{\circ}\text{C}</math> at a total pressure of 90 kPa, find the composition of the first vapour.</p>	<p>1. 89.6% A</p> <p>2. 82.6% A</p> <p>3. 82.6% A</p> <p>4. 92.5% A</p>
<p>Mass velocity is independent of temperature &amp; pressure, when the flow is</p>	<p>1.unsteady through unchanged cross-section. 2.steady through changing cross-section. 3.steady and the cross-section is unchanged 4.unsteady and the cross-section is changed.</p>
<p>A mercury (specific gravity = 13.6) manometer connected across an orificemeter fitted in a pipe shows a manometer reading of 2 cms. If the manometer liquid is changed to carbon tetrachloride (specific gravity = 1.6), then for the same flow rate of water the new manometer reading will be _____ cms</p>	<p>1.17 2.42 3.18 4.1.8</p>
<p>Viscosity of water at <math>40^{\circ}\text{C}</math> lies in the range of</p>	<p>1.1 x <math>10^{-3}</math> to 2 x <math>10^{-3}</math> kg/m.s 2.0.5 x <math>10^{-3}</math> to 1 x <math>10^{-3}</math> kg/m.s 3.1 to 2 kg/m.s 4.0.5 to 1 kg/m.s</p>
<p>1. A centrifugal pump has the following specifications: Power = 4 H.P.; Speed = 800 rpm Head = 8 metres Flow = 1000 litres/minutes. If its speed is halved, the new discharge will be _____ litres/minute.</p>	<p>1.500 2.200 3.1000 4.750</p>
<p>If two capillary tubes of dia 0.5 mm and 1 mm are dipped in a pot containing mercury, then the rise of mercury is</p>	<p>1.same in both the tubes. 2.greater in 1 mm dia tube. 3.greater in 0.5 mm dia tube. 4.zero in both the tubes.</p>



Pressure drop ( $\Delta p$ ) for a fluid flowing in turbulent flow through a pipe is a function of velocity ( $V$ ) as	1. $V^{1.8}$ 2. $V^{-0.2}$ 3. $V^{2.7}$ 4. $V^{2.0}$
A pressure of 10 m head of water is equivalent to _____ $\text{kN/m}^2$ .	1. 98 2. 147 3. 196 4. 49
Drag co-efficient $C_D$ , in Stoke's law range is given by	1. 2. 3. 4.

The phenomenon occurring during pumping of a liquid solution containing dissolved gases, which may come out of the solution giving rise to gas pockets, is termed as	1. evaporation 2. cavitation 3. sublimation 4. stripping
The softness or hardness of a grinding wheel depends upon the type & amount of bonding material used. For general purpose cutter grinding _____ grinding wheel is normally used.	1. hard 2. soft 3. silicon carbide 4. aluminium oxide
Fog is an example of colloidal system of	1. solid dispersed in gas. 2. solid dispersed in liquid.
	3. liquid dispersed in gas. 4. gas dispersed in liquid.
Evaporative cooling process employs a combination of cooling and humidification in which the	1.sensible heat is added. 2.sensible heat is removed and the latent heat is added. 3.latent heat is removed. 4.sensible heat is added and latent heat is removed

Spherical shape of mercury droplets is due to its	1.high viscosity. 2.low surface tension. 3.high density. 4.high surface tension.
Which of the following is the most suitable material of construction for the condenser tubes, where the cooling medium is brine (salty water)?	1.Aluminium 2.Copper 3.Titanium 4 .Stainless steel
The minimum temperature to which the water can be cooled in a cooling tower is the _____ temperature of air.	1.ambient 2.dry bulb 3.dew point 4.wet bulb
Volumetric composition of flue gas analysed with the Orsat apparatus is : CO <sub>2</sub> = 12%, O <sub>2</sub> = 8%, CO = nil, N <sub>2</sub> = 80%. This flue gas composition indicates that	1.pure oxygen has been used for combustion. 2.nitrogen percentage in the fuel is very high. 3.excess air has been used for combustion. 4.hydrogen is not present in the fuel.
For a series of reactions  having $k_1 \ll k_2$ , the reaction system can be approximated as	1.  2.  3.  4.
For nearly isothermal operation involving large reaction time in a liquid-phase reaction, the most suitable reactor is a _____ reactor.	1. stirred tank 2.
	tubular flow 3. batch 4. fixed bed

<p>In a reversible chemical reaction having two reactants in equilibrium, if the concentration of the reactants are doubled, then the equilibrium constant will</p>	<ol style="list-style-type: none"> <li>1. remain the same</li> <li>2. become one fourth</li> <li>3. be halved</li> <li>4. also be. doubled</li> </ol>
<p>For the liquid phase zero order irreversible reaction <math>A \rightarrow B</math>, the conversion of A in a CSTR is found to be 0.3 at a space velocity of <math>0.1 \text{ min}^{-1}</math>. What will be the conversion for a PFR with a space velocity of <math>0.2 \text{ min}^{-1}</math>? Assume that all the other operating conditions are the same for CSTR and PFR.</p>	<ol style="list-style-type: none"> <li>1. 0.15</li> <li>2. 0.30</li> <li>3. 0.60</li> <li>4. 0.90</li> </ol>
<p>In Langmuir treatment of adsorption,</p>	<ol style="list-style-type: none"> <li>1. whole surface of the catalyst does not have the same activity for adsorption and there is attraction between the adsorbed molecule.</li> <li>2. whole surface of the catalyst is essentially uniform and the adsorbed molecule has no effect on the rate of adsorption per site.</li> </ol>

	<p>3.</p> <p>all the adsorption does not take place by the same mechanism.</p> <p>4.</p> <p>extent of adsorption is more than one complete monomolecular layer on the surface.</p>
<p>A particle A of diameter 10 microns settles in an oil of specific gravity 0.9 and viscosity 10 poise under Stoke's law. A particle B with diameter 20 microns settling in the same oil will have a settling velocity</p>	<p>1. same as that of A.</p> <p>2.</p> <p>one fourth as that of A.</p> <p>3. twice as that of A</p> <p>4.</p> <p>four times as that of A.</p>
<p>A centrifugal pump is used to pump water through a horizontal distance of 150 m, and then raised to an overhead tank 10 m above. The pipe is smooth with an I.D of 50 mm. What head (m of water) must the pump generate at its exit (E) to deliver water at a flow rate of <math>0.001 \text{ m}^3/\text{s}</math>? The Fanning friction factor, <math>f</math> is 0.0062.</p>	<p>1.</p> <p>10 m</p> <p>2.</p> <p>11 m</p> <p>3.</p> <p>20 m</p> <p>4.</p> <p>22 m</p>
<p>Foot valves are provided in the suction line of a centrifugal pump to</p>	<p>1.</p> <p>avoid priming, every time we start the pump.</p> <p>2.</p> <p>remove the contaminant present in the liquid.</p> <p>3.</p>

	<p>minimise the fluctuation in discharge.</p> <p>4.</p> <p>control the liquid discharge.</p>
<p>Presence of _____ in a dry gaseous fuel does not contribute to its calorific value.</p>	<p>1.</p> <p>sulphur</p> <p>2.</p> <p>oxygen</p> <p>3.</p> <p>hydrogen</p> <p>4.</p> <p>carbon</p>
<p>It takes 6 hours to dry a wet solid from 50% moisture content to the critical moisture content of 15%. How much longer it will take to dry the solid to 10% moisture content, under the same drying conditions? (The equilibrium moisture content of the solid is 5%).</p>	<p>1. 15 min 2. 51 min 3. 71 min</p> <p>4.</p> <p>94 min</p>
<p>In extractive distillation, solvent is</p>	<p>1.</p> <p>added to alter the relative volatility of the mixture.</p> <p>2.</p> <p>of high volatility.</p> <p>3. present in overhead stream.</p> <p>4.</p> <p>of high viscosity to give high tray efficiency.</p>

Which of the following is the most commonly used leaching solvent in vegetable oil industry ?	1. Phenol 2. hexane 3. Furfurol 4. Liquid SO <sub>2</sub>
Mechanism of moisture removal in case of freeze drying of food stuff is by	1. evaporation 2. dehydration 3. adsorption 4. sublimation
Pulverised coal passing through 200 mesh screen has a diameter of 0.074 mm (74 micron). The same passing through 50 mesh screen will have a dia of _____ mm.	1. 0.007 2. 0.03 3. 50 4. 0.014
Three material A, B and C of equal thick-nes and of thermal conductivity of 20, 40 & 60 kcal/hr. m. °C respectively are joined together. The temperature outside of A and C are 30°C and 100°C respectively. The	1. 70 2. 90

interface between B and C will be at a temperature of _____ °C.	
	3. 60  4.  50
The equation, $(N_{St} \times N^{2/3}_{Pr}) = f/2$ , is the _____ analogy.	1. Colburn  2. Reynolds  3. Prandtl  4. Reynolds Transport
In a co-current double pipe heat exchanger used for condensing saturated steam over the inner tube, if the entrance and exit conditions of the coolant are interchanged, then the rate of condensation will	1.        increase  2.        decrease  3. remain unchanged  4. either increase or decrease; depends on the coolant flow rate



The thermal boundary layer at $N_{Pr} > 1$	<p>1. is thicker than hydrodynamic boundary layer.</p> <p>2. is thinner than hydrodynamic boundary layer.</p> <p>3. and the hydrodynamic boundary layer are identical.</p>
	<p>4. disappears.</p>
The units of resistance to heat transfer is	<p>1. <math>J.m^{-2}.K^{-1}</math></p> <p>2. <math>J.m^{-1}.K^{-1}</math></p> <p>3. <math>W.m^{-2}.K^{-1}</math></p> <p>4. <math>W^{-1}m^2K</math></p>
The overall heat transfer co-efficient for a shell and tube heat exchanger for clean surfaces is $U_0 = 400 \text{ W/m}^2.K$ . The fouling factor after one year of operation is found to be $h_{d0} = 2000 \text{ W/m}^2.K$ . The overall heat transfer co-efficient at this time is	<p>1. <math>1200 \text{ W/m}^2.K</math></p> <p>2. <math>894 \text{ W/m}^2.K</math></p> <p>3. <math>333 \text{ W/m}^2.K</math></p> <p>4. <math>287 \text{ W/m}^2.K</math></p>

In the Tayler standard screen series, the ratio of the actual mesh dimension of any screen to that of the next smaller screen is	1. 1 2. 1.41 3. 1.71 4. 2
In a ball mill most of the reduction is done by	1. slow compression
	2. cutting  3. attrition  4. impact
In which type of impeller used in liquid agitation, the flow is coaxial ?	1. Turbine  2. Propeller 3. Paddle  4. SMX

Power number is proportional to the ratio of	<p>1.</p> <p>drag force acting on a unit area of impeller to the inertial stress</p> <p>2.</p> <p>gravity force acting on a unit area of impeller to the inertial stress</p> <p>3.</p> <p>the inertial stress to the gravitational force per unit area acting on the fluid</p> <p>4.</p> <p>Inertial force to viscous force</p>
Identify the group in which all the polymers mentioned can be used to make fibers	<p>1.</p> <p>Butadiene copolymers, Polyamides, Urea aldehydes</p> <p>2.</p>
	<p>Cellulose derivatives, Polyisoprene, Polyethylene</p> <p>3.</p> <p>Cellulose derivatives, Polyamides, Polyurethanes</p> <p>4.</p> <p>Polypropylenes, Polyvinyl-chloride, Silicones</p>

Which of the following is a detergent ?	<p>1. Benzene hexachloride</p> <p>2. Cellulose nitrate</p> <p>3. Polyvinyl chloride</p> <p>4. Alkyl benzene sulfonate</p>
Butyl rubber is a copolymer of –	<p>1. 1-butene with a small amount of isobutene,</p> <p>2. isobutene with a small amount of 2methylbutadiene (isoprene)</p> <p>3. butadiene with a small amount of propylene,</p> <p>4. 1-butene with a small amount of butadiene,</p>
What is Vinegar ?	<p>1. dilute solution of acetic acid</p> <p>2. double distilled alcohol</p> <p>3. food grade phosphoric acid</p> <p>4. 5% saline solution</p>

Raw materials for the production of urea are	1. carbon dioxide and sodium chloride, 2. carbon dioxide and ammonia, 3. ammonia and carbon disulfide 4. Sodium chloride, ammonia and carbon disulfide
The percentage available chlorine in a good commercial sample of bleaching powder is	1. 15 to 17 %, 2. 35 to 37 %, 3. 53 to 56 %, 4. 69 to 71.5%
Which of the following is an important reinforcing agent for various elastomers ?	1. sodium sulfate, 2. barium carbonate 3. sodium sesquisilicate, 4.
	carbon black

<p>The membranes employed in the membrane cell (for chlorine and caustic soda production) are basically</p>	<p>1. perfluorinated polymers with occasional sulfonate and/or carboxylate groups,</p> <p>2. nylon 6, 6,</p> <p>3. polyvinyl acetate,</p> <p>4. high density polyethylene,</p>
<p>Which of the following is polysaccharide?</p>	<p>1. Sucrose</p> <p>2. Starch</p> <p>3. Glucose</p> <p>4. Fructose</p>
<p>A chemostat has a liquid volume of 2 litres and is being fed at a rate of 4 litres per hour. Dilution rate for this reactor will be</p>	<p>1. 2 litres</p> <p>2. 2 litres per hour</p> <p>3. <math>2\text{ h}^{-1}</math></p> <p>4. 4 litres per hour</p>
<p>What is its percentage humidity ? Vapour pressure of water at <math>20^{\circ}\text{C}</math> is 17.5 mm Hg.</p>	<p>1. 80.38</p>

	<p>2. 80</p> <p>3.</p> <p>79.62</p> <p>4.</p> <p>78.51</p>
An aqueous solution of 2.45% by weight $\text{H}_2\text{SO}_4$ has a specific gravity of 1.011. The composition expressed in normality is	<p>1.</p> <p>0.2528</p> <p>2.</p> <p>0.2000</p> <p>3.</p> <p>0.500</p> <p>4.</p> <p>0.5055</p>
Cavitation will not occur if the sum of the velocity and pressure heads at the suction is	<p>1.</p> <p>much larger than the vapour pressure of the liquid</p> <p>2. zero</p> <p>3.</p> <p>much smaller than the vapour pressure of the liquid</p> <p>4.</p> <p>equal to the vapour pressure of the liquid.</p>
At the stagnation point,	<p>1. pressure is zero</p> <p>2.</p> <p>velocity is zero</p> <p>3.</p>

	<p>both pressure and velocity is zero</p> <p>4.</p> <p>neither pressure nor velocity is zero</p>
The pressure within the soap bubble is	<p>1.</p> <p>Less than the external pressure</p> <p>2. greater than the external pressure</p> <p>3.</p> <p>Equal to the external pressure</p> <p>4.</p> <p>Equal to the vapour pressure at the prevailing temperature</p>
Rain drops fall from a great height under gravity. Select the only correct statement from the following?	<p>1.</p> <p>Their velocity goes on increasing until they hit the earth with the same velocity</p> <p>2.</p> <p>Their velocity goes on increasing until they hit the earth with the same velocity, but final velocities of different drops are different.</p> <p>3.</p> <p>They fall with a terminal velocity which is the same for every drop</p> <p>4.</p> <p>They fall with terminal velocities which are different for drops of different size.</p>
The crushing energy required to create new surface is given by	<p>1.</p> <p>Fick's law</p> <p>2.</p> <p>Rittinger's law</p> <p>3.</p>



	Fouriers's law 4. Kopp's law
For transportation of grain, asphalt, crushed coal, ashes, gravel and sand to a short distance we may use a	1. Screw conveyor 2. Ribbon conveyor 3. Flight conveyor 4. Slat conveyor
	1. 3 2. 4 3. 5 4. 6
_____ data structure used in pushdown automata.	1. <b>Stack</b> 2. array 3. queue 4. linked list

Where in an HTML document is the correct place to refer to an external style sheet?	1. In the section 2. In the section 3. At the end of the document <b>4. At the top of the document</b>
Pick the odd one out.	1. [] 2. () <b>3. ::</b> 4. ~
class n{ public: int a;}  obj; obj.a=10; cout << a;<obj.a;< p="" style="box-sizing: border-box;"></obj.a;<>	1. <b>error</b> 2. 10 3. 1 4. 0
Which of the regular expressions given below represent the following DFA?  I) $0^*1(1+00^*1)^*$ II) $0^*1^*1+11^*0^*1$ III) $(0+1)^*1$	1. I and II only 2. I and III only <b>3. II and III only</b> 4. I, II, III
Consider the DFAs M and N given above. The number of states in a minimal DFA that accepts the language $L(M) \cap L(N)$ is _____.	<b>1. 0</b> 2. 1 3. 2 4. 3

What is data encryption standard (DES)?	<p>1. <b>block cipher</b></p> <p>2. stream cipher</p> <p>3. bit cipher</p> <p>4. none of the mentioned</p>
The physical layer concerns with	<p>1. <b>bit-by-bit delivery</b></p> <p>2. process to process delivery</p> <p>3. application to application delivery</p> <p>4. Hop by hop delivery</p>
The maximum window size for data transmission using the selective reject protocol with n-bit frame sequence numbers is:	<p>1. <math>2^n</math></p> <p>2. <b><math>2^{n-1}</math></b></p> <p>3. <math>2^n - 1</math></p> <p>4. <math>2^{n-2}</math></p>
ElGamal encryption system is:	<p>1. symmetric key encryption algorithm</p> <p>2. <b>asymmetric key encryption algorithm</b></p> <p>3. not an encryption algorithm</p> <p>4. none of the mentioned</p>
Network operating system that does not support symmetric multi-processing (SMP) is	<p>1. Banyan (VINES) 2. Microsoft NT advanced server 3. SCO Unix</p> <p>4. <b>Novell Network 3.X</b></p>

The topology with highest reliability is .....	1. ring topology 2. star topology 3. bus topology <b>4. mesh topology</b>
In which topology, if there are n devices in a network, each device has n-1 ports for cables?	<b>1. Mesh</b> 2. Star 3. Ring 4. Bus
Frames of 1000 bits are sent over a $10^6$ bps duplex link between two hosts. The propagation time is 25ms. Frames are to be transmitted into this link to maximally pack them in transit (within the link). What is the minimum number of bits, i will be required to represent the sequence numbers distinctly? Assume that no time gap needs to be given between transmission of two frames.	1. i=2 2. i=3 3. i=4 <b>4. i=5</b>
Station A needs to send a message consisting of 9 packets to Station B using a sliding window (window size 3) and go back-n error control strategy. All packets are ready and immediately available for transmission. If every 5th packet that A transmits gets lost (but no acks from B ever get lost), then what is the number of packets that A will transmit for sending the message to B?	1. 12 2. 14 <b>3. 16</b> 4. 18
Suppose the round trip propagation delay for a 10 Mbps Ethernet having 48-bit jamming signal is 46.4 micro sec. The minimum frame size is:	1. 94 2. 416 3. 464 <b>4. 512</b>

In a network of LANs connected by bridges, packets are sent from one LAN to another through intermediate bridges. Since more than one path may exist between two LANs, packets may have to be routed through multiple bridges. Why is the spanning tree algorithm used for bridgerouting?	1. For shortest path routing between LANs <b>2. For avoiding loops in the routing paths</b> 3. For fault tolerance 4. For minimizing collisions
Which one of the following is an internet standard protocol for managing devices on IP network?	1. dynamic host configuration protocol <b>2. simple network management protocol</b> 3. internet message access protocol 4. media gateway protocol
In wireless distribution system	<b>1. multiple access point are inter-connected with each other</b> 2. there is no access point 3. only one access point exists 4. none of the mentioned
What is WPA?	<b>1. wi-fi protected access</b> 2. wired protected access 3. wired process access 4. wi-fi process access
<pre>int main() {</pre>	

<pre> int x,y;  x=(100,200) ; y=100,200;      printf("x=%d,y=%d",x,y);  return 0; } </pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li>1. x=100,y=200</li> <li>2. x=200,y=200</li> <li>3. ERROR</li> <li>4. x=200,y=100</li> </ol>
<p>It would be ideal if all of computer science theories can be used in software engineering.</p>	<ol style="list-style-type: none"> <li>1. False</li> <li>2. True</li> <li>3.</li> <li>4.</li> </ol>
<p>Consider the following:</p> <pre> temp=root-&gt;left; while(temp-&gt;right!=NULL) temp=temp-&gt;right;    return temp; </pre> <p>The above code snippet for a BST with the address of the root node in pointer 'root' returns</p>	<ol style="list-style-type: none"> <li>1. Inorder successor of the root</li> <li>2. Maximum element in the right subtree of root</li> <li>3. Minimum element in the right subtree of root</li> <li>4. Inorder predecessor of the root</li> </ol>

Let G be a weighted connected undirected graph with distinct positive edge weights.If every edge weight is increased by the same value, then which of the following statements is/are TRUE ? P: Minimum spanning tree of G does not change. Q: Shortest path between any pair of vertices does not change	<p><b>1. P Only</b></p> <p>2. Q Only</p> <p>3. Neither P nor Q</p> <p>4. Both P and Q</p>
Which multiple access technique is used by IEEE 802.11 standard for wireless LAN?	<p>1. CDMA</p> <p><b>2. CSMA/CA</b></p> <p>3. ALOHA</p> <p>4. CSMA/CD</p>
Assume that a table R with 1000 records is to be joined with another table S with 10000 records. What is the maximum number of records that would result in if we join R with S and the equi-join attribute of S is the primary key?	<p><b>1. 1000</b></p> <p>2. 10000</p> <p>3. 1,00,00,000</p> <p>4. 11000</p>
The maximum number of superkeys for the relation schema R(E,F,G,H) with E as the key is	<p>1. 7</p> <p><b>2. 8</b></p> <p>3. 9</p> <p>4. 6</p>
The best index for exact match query is	<p><b>1. Bucket Hash</b></p> <p>2. Quad tree</p> <p>3. B Tree</p> <p>4. B+ Tree</p>

The use of traceability tables helps to	1. debug programs following the detection of run-time errors 2. determine the performance of algorithm implementations <b>3. identify, control, and track requirements changes</b> 4. Analyze design changes
The spiral model of software development	<b>1. Ends with the delivery of the software product</b> 2. Is not more chaotic than the incremental model 3. Do not Include project risks evaluation during each iteration 4. Includes feasibility risks
Evolutionary software process models	1. Are not iterative in nature <b>2. Can easily accommodate product requirements changes</b> 3. Generally produce throwaway systems 4. Are not specific to applications
An activity is said to be critical if slack time is equal to	<b>1. 0</b> 2. 1 3. 2 4. 3
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 postorder traversal sequence of the same tree?	1. 10,20,15,23,25,35,42,39,30 2. 15,10,25,23,20,42,35,39,30 3. 15,20,10,23,25,42,35,39,30 <b>4. 15,10,23,25,20,35,42,39,30</b>



Assume that we have constructor functions for both base class and derived class. Now consider the declaration in main( ). Base * P = New Derived; in what sequence will the constructor be called ?	1. Derived class constructor followed by Base class constructor. <b>2. Base class constructor followed by derived class constructor.</b> 3. Base class constructor will not be called. 4. Derived class constructor will not be called.
Which of these is asymptotically bigger?	1. $79n^2+43n$ <b>2. <math>65n^3+34n</math></b> 3. $6*2^n$ 4. $5*2n$
If a , b , c, are three nodes connected in sequence in a singly linked list, find the valid statement that may help to change this list to a circular linked list?	1. a->next=c 2. b->next=c 3. a->next=c <b>4. c-&gt;next=b</b>
<pre>class n{ public: int a=7;}p,q; cout&lt;&lt; n.a;&lt;a;&lt;p="" style="box-sizing: border-box;"&gt;&lt;/a;&lt;&gt;</pre>	1. 0 2. <b>error</b> 3. depends on compiler 4. 7
By default, any real number in C is treated as _____	<b>1. a float</b> 2. a double 3. a long double 4. depends on the memory model

With a single resource, deadlock occurs	<ol style="list-style-type: none"> <li>1. if there are more than two processes competing for that resource</li> <li>2. if there are only two process completing for that resource</li> <li>3. if there is a single process competing for that resource</li> <li>4. it never occur in this case</li> </ol>
<p>Consider the following javascript code snippet :</p> <pre>var a = []; a.unshift(1); a.unshift(22); a.shift(); a.unshift(3,[4,5]); a.shift(); a.shift(); a.shift();</pre> <p>The final output for the shift() is</p>	<ol style="list-style-type: none"> <li>1. 1</li> <li>2. [4,5]</li> <li>3. [3,4,5]</li> <li>4. Exception</li> </ol>

Consider the following C program.

```
#include <stdio.h>
```

```
in
```

```
t
```

```
f
```

```
1
```

```
(v
```

```
oi
```

```
d
```

```
);
```

```
in
```

```
t
```

```
f
```

```
2
```

```
(v
```

```
oi
```

```
d
```

```
);
```

```
in
```

```
t
```

```
x
```

```
=
```

```
1
```

```
0;
```

```
int main ()
```

```
{
```

```
int x=1;
```

```
x+=f1()+
```

```
f2()+f3()+
```

```
f2();
```

```
printf("%
```

```
d", x);
```

```
return 0;
```

```
}
```

```
int f1(){int x=25; x++;
```

```
return x;} int f2(){static
```

```
int x =50; x++;return
```

```
x;} int f3(){x*=10;
```

```
return x};
```

The output of the program is\_\_\_\_\_.

1. 434

2. 230

3. 43

4. 432

<p>Consider the following C code segment:</p> <pre> int a, b, c = 0; void prtFun(void); main( ) {     static int a = 1; /* Line 1 */     prtFun( ); a += 1;     prtFun( )     printf("\n %d %d", a, b); }  void prtFun(void) {     static int a=2; /* Line 2 */     int b=1; a+=++b;     printf("\n %d %d", a, b); } </pre> <p>What output will be generated by the given code segment if:</p> <p>Line 1 is replaced by <code>auto int a = 1;</code></p> <p>Line 2 is replaced by <code>register int a = 2;</code></p>	<pre> 1. 31 41 42 2. 42 61 61 3. 42 62 20 4. 42 42 20 </pre>
<p>Consider the following code snippet</p> <pre> function oddsums(n) { </pre>	

```

    let total = 0,
    result=[];    for(let x
= 1; x <= n; x++)

    {
        let odd =
2*x-1;
total += odd;
result.push(tot
al);

    }

    return result;
}

```

What would be the output if  
odds(5);

1. Returns [1,4,9,16,25]

2. Returns [1,2,3,4,5]

3. Returns [3,6,9,12,15]

4. Returns [1,3,5,7,9]

An incorrectly typed command will cause  
the operating system to display

1. a prompt

2. an error message

3. a question mark

4. causes exception

<p>Round Robin scheduling is the strategy of temporarily suspending a running process</p>	<p><b>1. After the CPU time slice expires</b></p> <p>2. to allow starving processes to run</p> <p>3. when it requests IO</p> <p>4. when OS wait</p>
<p>Which one of the following statements is NOT correct about HTTP cookies?</p>	<p><b>1. A cookie is a piece of code that has the potential to compromise the security of an internet user</b></p> <p>2. A cookie gains entry to the user's work area through an HTTP header</p> <p>3. A cookie has an expiry date and time</p> <p>4. Cookies can be used to track the browsing pattern of a user at a particular site</p>

Find the output of the following program?

```
#include
<iostream.h>
using namespace std;
typedef int *IntPtr;
int
main()
{
    IntPtr
    ptr
    A,
    B,
    C;
    int
    D,
    E;
    A = new int(3);
    B = new int(6);
    C = new int(9);
    D = 10;
    E = 20;
    *A = *B;
    B = &E;
    D = (*B)++;
    *C =
    (*A)++ *
    (*B)--;
    E = *C++
    - *B--;
    cout<<*A<<*B<<*C<<D<<E;
    return 0;
}
```

1. 62010206

2. 72010107

3. 71020106

4. 10720107

Find the output of the following program?

```
#include <iostream.h>
using namespace std;
```

```
void myFunction(int& x, int* y,
int* z) { static int temp=1;
temp += (temp +
temp) - 1; x +=
*(y++ + *z)+ temp -
++temp;
*
y
=
x
;

x
=
t
e
m
p
;
*z= x;
cout<<x<<*y<<*z<<temp;<x<<*y<<*z<<tem
p;

}

i
n
t

m
a
i
n
(
)

{
```

1. 3 3 3 2

2. 3 2 3 3

3. 3 3 2 3 2

4. 3 1 3 3



i  
n  
t

i

=

0

;

int j[] = {0, 1, 2, 3,  
4, 5, 6, 7, 8, 9};

i=i++ - ++i;

myFunction(i, j,  
&i); return 0;

}

</x<<\*y<<\*z<<temp;

Choose the correct HTML to left-align the content inside a table cell	<ol style="list-style-type: none"><li>1. &lt;tdleft&gt;</li><li>2. &lt;td leftalign&gt;</li><li>3. &lt;td valign="left"&gt;</li><li>4. <b>&lt;td align="left"&gt;</b></li></ol>
Which of these is Server side technology?	<ol style="list-style-type: none"><li>1. <b>CGI</b></li><li>2. HTML</li><li>3. JavaScript</li><li>4. CSS</li></ol>
Which of the following is included in the head section of HTML	<ol style="list-style-type: none"><li>1. title,body,form and script</li><li>2. <b>title,meta tag,script and CSS</b></li><li>3. title , meta tag,css and form</li><li>4. title, body,script and CSS</li></ol>

<pre>#include &lt; stdio.h &gt; int main() {     typedef struct     {         int empid;         int bsal;     }EMP;      EMP E={10012,15100}; printf("%d,%d",E.empid,E.bsal);      return 0; }</pre> <p>Find the output</p>	<p>1. 10012,12100</p> <p>2. 0,0</p> <p>3. Error</p> <p>4.</p> <p>10012,10012</p>
<pre>#include &lt; stdio.h &gt;  int main() {     typedef auto int AI;  AI var=100; printf("va r=%d",var</pre>	<p>1. var=100</p> <p>2. var=AI</p> <p>3. ar=0</p> <p>4. Error</p>

```
);  
return 0;  
}
```

Find the output

```
#include  
  
int main()  
{  
    char ch=10; void *ptr=&ch;  
    printf("%d,%d",*(char*)ptr,++(*(  
char*)ptr)); return 0;  
}
```

Find the output

```
#include <stdio.h>
```

1. 11, 11 2. 10, 11

3. Error

4.

10, 10

<pre>int main() {     void *ptr;     ++ptr;     printf("%u",ptr);     return 0; }</pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li>1. 2004</li> <li>2. 2001</li> <li>3. 2000</li> <li>4. ERROR</li> </ol>
<pre>#include &lt; stdio.h &gt; int main() {     typedef int AAA,BBB,CCC,DDD;     AAA    aaa=10;     BBB    bbb=20;     CCC    ccc=30;   DDD ddd=40;     printf("%d,%d,%d,%d",aaa,bbb,ccc,ddd);      return 0; }</pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li>1. Error</li> <li>2. 10,10,10,10</li> <li>3. 10,20,30,40</li> <li>4. AAA,BBB,CCC,DDD</li> </ol>

<pre>#include &lt;stdio.h&gt; int main() {     typedef char* string;     string myName="ABCDEFGH";     printf("myName=%s (size=%d)",myName,sizeof(myName));     return 0; }</pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li>1. myName=ABCDEFGH(size=7)</li> <li>2. Error</li> <li>3. myName=ABCDEFGH(size=4)</li> <li>4. myName=ABCDEFGH(size=8)</li> </ol>
<pre>#in clu de voi d fun (int *pt r) {     *ptr=100;</pre>	

```

}
int main()
{
    int num=50;
    int *pp=#
    fun(& *pp);
    printf("%d,%d
",num,*pp);

    return 0;
}

```

Find the output

#  
i  
n  
c  
l  
u  
d  
e  
r  
i  
n  
t  
m  
a

1. 100,100
2. 50,50
3. 50,100
4. Error in function calling

- 1.
- 5
- 2.
- 5.0
- 3.
- ERROR
- 4.
- No output

<pre> { n ( ) { int a=10,b=2; int *pa=&amp;a,*pb=&amp;b; printf("value = %d", *pa/*pb);  return 0; } </pre>	
<p>Find the output</p> <pre> #include &lt;stdio.h&gt; int main() {     char     *str="IncludeHel p";     printf("%c\n",*&amp; *str);    return 0; } </pre> <p>Find the output</p>	<p>1. Error</p> <p>2. IncludeHelp</p> <p><b>3. I</b></p> <p>4. *I</p>
<pre> #include &lt;stdio.h&gt; </pre>	



<pre> int main() {     int anyVar=10 ; printf("%d ",10); return 0; } extern int anyVar; </pre> <p>Find the output</p>	<p>1.</p> <p>Complie time error</p> <p><b>2. 10</b></p> <p>3.</p> <p>Run Time error</p> <p>4.</p> <p>No output</p>
<pre> #include e &lt;stdio. h&gt; int main() {     int var=100;     {         int var=200; </pre>	<p>1.</p> <p>ERROR</p> <p>2.</p> <p>200...200 3.</p> <p>100...100</p>

<pre>printf("%d...",var);  }  printf("%d" ,var); return 0;  }  Find the output</pre>	<p><b>4. 200...100</b></p>
<pre>#include &lt;stdio.h&gt;  #define MAX 99 int main() {  printf("%d...", MAX);  #undef MAX printf("%d",MA X);  return 0;  }  Find the output</pre>	<p>1. 99...0</p> <p>2. 99...99</p> <p><b>3. Error</b></p> <p>4. MAX...MAX</p>
<pre>#include</pre>	

```

#define SUM(x,y)  int s; s=x+y;
printf("sum=%d\n",s); int main()
{

SUM(1
0,20);
return
0;
}

```

Find the output

```

#include
<stdio.h>
char*
strFun(voi
d)
{
char *str="IncludeHelp";

```

1. sum=30

2. 10,20

3. Error

4.

sum=0

```

    return str;
}

int main()
{
    char *x;
    x=strFun();
    printf("str
value =
%s",x);
    return 0;
}

```

Find the output

1. str value= Garbage value

2. **str value = IncludeHelp**

3. Error

4.

No output

```
#include <stdio.h>
```

```
#define VAR1  VAR2+10
```

```
#define VAR2  VAR1+20
```

```
int main()
```

```
{
```

```
printf("%d",V
```

```
AR1);
```

```
return 0;
```

```
}
```

Find the output

1. VAR2+10

2. VAR1+20

3. **Error**

4. 10

<pre> #include  int main() {     char *str []={"AAAAA","BBBBB","CCCCC","DDDDD"};      char **sptr  []={str+3,str+2,str+1,str};    char ***pp;      pp=sptr;  ++pp;  printf("%s", **++pp+2);  return 0;  }  Find the output </pre>	<ol style="list-style-type: none"> <li>1. BBBBB</li> <li>2. CCCCC</li> <li>3. BBB</li> <li>4. Error</li> </ol>
<pre> #include &lt;stdio.h&gt; #define TEXT  IncludeHelp  int main()  {  printf("%s",T EXT);  return 0; </pre>	<ol style="list-style-type: none"> <li>1. IncludeHelp</li> <li>2. TEXT</li> <li>3. Error</li> <li>4. TEXT IncludeHelp</li> </ol>

<pre>} </pre> <p>Find the output</p>	
<p>Register is a -- -----</p>	<ol style="list-style-type: none"> <li>1.Set of capacitor used to register input instructions in a digital computer</li> <li>2.Set of paper tapes and cards put in a file</li> <li><b>3. Temporary storage unit within the CPU having dedicated or general purpose use</b></li> <li>4.Part of the auxiliary memory</li> </ol>
<pre>#include &lt;stdio.h&gt;  #define OFF 0  #if debug == OFF     int a=11; #endif  int main() {     int     b=22;     printf("%d...%d",a,     b);     return 0; }  Find the output</pre>	<ol style="list-style-type: none"> <li><b>1. 11...22</b></li> <li>2. Error</li> <li>3. 11...11</li> <li>4. 22...22</li> </ol>

<pre>#include &lt;stdio.h&gt; #define LARGEST(x,y) (x&gt;=y)?x:y int main() {     int a=10,b=20,l=0;     l=LARGEST(a++,b++);     printf("a=%d,b=%d,largest= %d",a,b,l);    return 0; }</pre>	<ol style="list-style-type: none"> <li>1. a=10,b=20,largest=20</li> <li>2. a=11,b=21,largest=20</li> <li>3. a=11,b=21,largest=21</li> <li><b>4. a=11,b=22,largest=21</b></li> </ol>
<p>Find the output</p> <pre>#include &lt;stdio.h&gt; #define FUN(x,y) x##y int main() {     int a1=10,a2=20;     printf("%d...%d",FUN(a,1),FU N(a,2)); return 0; }</pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li>1. Error</li> <li>2. 10...10</li> <li>3. 20...20</li> <li><b>4. 10...20</b></li> </ol>

```

#include
e
<stdio.
h> int
main()
{
    int  iVal;
char  cVal;
void  *ptr; //
void pointer
iVal=50;
cVal=65;

    ptr=&iVal;  printf("value =%d,size=
%d\n",*(int*)ptr,sizeof(ptr));

    ptr=&cVal;  printf("value =%d,size=
%d\n",*(char*)ptr,sizeof(ptr)); return 0;
}

```

1. Error

2. value =50,size= 4 value =65,size= 4

3. value =50,size= 4 value =65,size= 1

4. Garbage value



<p>Find the output</p> <pre>#include  #define FUN(x) x*x  int main()  {  int val=0;  val=128/FUN  (8);  printf("val=%  d",val);  return 0;  }</pre> <p>Find the output</p>	<p>1. 2</p> <p><b>2. 12864</b></p> <p>3. 40</p> <p>4. 1</p>
<pre>#include &lt;stdio.h&gt;  #define MAX 100  int main()  {  #define MAX 20  printf("MAX=%d...  ",MAX); return 0;  }</pre> <p>Find the output</p>	<p>1. Error</p> <p>2. MAX=100...</p> <p><b>3. MAX=20...</b></p> <p>4. MAX=10020</p>

```
#include int fooo(void) { static int num=0;
num++; return num; } int main() { int val;
val=fooo(); printf("step1: %d\n",val);
val=fooo(); printf("step2: %d\n",val);
val=fooo(); printf("step3: %d\n",val); return
0; }
```

Find the output

1. step1: 1 step2: 1 step3: 1

**2. step1: 1 step2: 2 step3: 3**

3. step1: 0 step2: 0 step3: 0

4. ERROR

<pre>#include &lt;stdio.h&gt;  int main() { #ifdef debug printf("Start debugging...");  #endif printf("Includ eHelp"); return 0; }</pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li>1. Start debugging...IncludeHelp</li> <li>2. IncludeHelp</li> <li>3. Error</li> <li>4. debug</li> </ol>
<p>If you don't want the frame windows to be resizeable, simply add what to the lines ?</p>	<ol style="list-style-type: none"> <li>1. save</li> <li>2. dontresize</li> <li>3. noresize</li> <li>4. Delete</li> </ol>

<pre>#include &lt;stdio.h&gt; char* fun1(void) {     char str[]="Hello"; return str; }  char* fun2(void) {     char *str="Hello"; return str; }  int main() {  printf("%s,%s",fun1(),fu n2());  return 0; }  Find the output</pre>	<ol style="list-style-type: none"><li>1. ERROR</li><li>2. Hello,Hello</li><li>3. Hello,Garbage</li><li>4. Garbage,Hello</li></ol>
--	---

<pre>#include &lt;stdio.h&gt; int main() {     union test     {         int i;         int j;     };      union test var=10;     printf("%d,%d\n",var.i,var.j); }</pre>	<p>1. 10,10</p> <p>2. 10,0</p> <p>3. 0,10</p> <p><b>4. Error</b></p>
---	--

Find the output

<pre>#include &lt;stdio.h&gt; int main() {     struct std     {         char         name[30];         int age;     };     struct std     s1={"Mike",26};     struct std s2=s1;      printf("Name: %s, Age:     %d\n",s2.name,s2.age); }</pre> <p>Find the output</p>	<p>1. Name: Mike, Age: 26</p> <p>2. Name: Garbage, Age: Garbage</p> <p>3. Name: Null, Age: 26</p> <p>4. Error</p>
---	---

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    typedef struct tag{
```

```
        char
```

```
        str[1
```

```
        0];
```

```
        int a;
```

```
    }har;
```

```
    har
```

```
    h1,h2={"IHelp",
```

```
    10};    h1=h2;
```

```
    h1.str[1]='h';
```

```
    printf("%s,%d",
```

```
    h1.str,h1.a);
```

```
    return 0;
```

```
}
```

Find the output

1. ERROR

2. IHelp, 10

3. IHelp, 0

4. Ihelp, 10

<pre>#inclu de &lt;stdio. h&gt; int main()  {     union values     { int intVa l; char chrV al[2]; i      };      union values val; val.chrVal[0]='A'; val.chrVal[1]='B';  printf("\n%c,%c,%d",val.chrVal[0],val.chrVal[ 1],val.intVal) ;     return 0; }</pre>	<p>1. A,B,0</p> <p>2. A,B,16961</p> <p>3. B,B,66</p> <p>4. A,A,65</p>
---	---



<pre> #include #include &lt;stdio.h&gt; struct employee {     int id;     char *name;     int age; };  int main() {     struct employee emp []={ {1,"Mike",24},     {2,"AAA",24}, {3,"BBB",25}, {4,"CCC",30} };      printf("Id : %d, Age : %d, Name : %s",     emp[2].empId,3[emp].age,(*(emp+1)).name     );      return 0; } </pre> <p>Find the output</p>	<p>1. Id: 3, Age: 24, Name: Mike 2.</p> <p>Id: 3, Age: 23, Name: Mike</p> <p><b>3. Id: 3, Age: 30, Name: AAA</b></p> <p>4. Error</p>
<pre>#include &lt;stdio.h&gt;</pre>	

```
struct sample
```

```
{
```

```
    i
```

```
    n
```

```
    t
```

```
    a
```

```
;
```

```
}sample;
```

```
int main()
```

```
{
```

```
    sample.a=100;
```

```
    printf("%d",sample.a);
```

```
    return 0;
```

```
}
```

Find the output

1. 0

2. 100

3. ERROR

4. arning

<pre> #include &lt;stdio.h&gt; #include &lt; string.h &gt;  struct student {     char name[20]; }std; char * fun(struct student *tempStd) {     strcpy(tempStd- &gt;name,"Thomas");  return tempStd-&gt;name; }  int main() {     strcpy(std.name,"Mike "); printf("%s%s",std.name,fun(&amp;std));      return 0; } </pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li>1. Mike Thomas</li> <li>2. Mike Mike</li> <li>3. ThomasThomas</li> <li>4. ThomasMike</li> </ol>
<pre> #include &lt;stdio.h&gt; </pre>	<ol style="list-style-type: none"> <li>1.</li> </ol>

```
int main()
```

```
{
```

```
    struct sample{
```

```
        i
```

```
        n
```

```
        t
```

```
        a
```

```
    ;
```

```
    i
```

12, 12

2.      12, 0

3.      Error

4. 12, 4

```
n
t
b
;

    sample *s;
}t;

printf("%d,%d",sizeof(sample),sizeof
(t.s));  return 0;
}
```

Find the output

Find the output

```
#include
<stdio.h>
struct
sample
{
```

i  
n  
t  
a  
=  
0  
;  
c  
h  
a  
r  
b  
=  
,  
A  
';  
f  
l  
o  
a  
t  
c  
=  
1  
0  
.

1. Error

2.0,A,10.5

3. 0,A,10.500000

4. No Error, No Output

<pre> 5 ;  };  int main() {     struct sample s;     printf("%d,%c,%f",s.a,s. b,s.c);    return 0; } </pre>	
<pre> #include &lt;stdio.h&gt; #include e &lt;string. h&gt; int main()  {     char str[50]="IncludeHelp";     printf("%d...%d",strlen(str),sizeof (str));    return 0; }  Find the output </pre>	<pre> 1. 50...5011...50 2. 11...50 3. 11...11 4. 50...11 </pre>

<pre>#include &lt;stdio.h&gt; #include &lt;string.h&gt; int main() {     char s1[]="IncludeHelp";     char s2[10];      strncpy(s2,s1,5); printf("%s",s2); return 0; }</pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li>1. IncludeHelp</li> <li>2. IncludeGARBAGE_VALUE</li> <li>3. Error</li> <li>4. IncludeHelp</li> </ol>
<pre>#include &lt;stdio.h&gt; int main() {     char result, str[]="\0IncludeHelp";     result=printf("%s",str);</pre>	<ol style="list-style-type: none"> <li>1. \0IncludeHelpTRUE</li> <li>2. \0IncludeHelpFALSE</li> <li>3.</li> </ol>



<pre> if(result ) printf(" TRUE"); else printf(" FALSE"); return 0; } </pre> <p>Find the output</p>	<p>Error</p> <p><b>4. FALSE</b></p>
<pre> #include &lt;stdio.h&gt;  int main() {     char str[]="value is =%d";  int a='7'; str[11]='c'; printf(str,a); return 0; } </pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li>1. value is = %d</li> <li>2. value is = %c</li> <li>3. value is = 55</li> <li><b>4. value is = 7</b></li> </ol>

<pre>#include e &lt;stdio. h&gt; int main()  {     char str[]="Hello%s%dFriends";  printf(str); printf("\n" ); printf("%s ",str); return 0;  }  Find the output</pre>	<ol style="list-style-type: none"> <li>1. HelloFriends HelloFriends</li> <li>2. Hello%s%dFriends Hello%s%dFriends</li> <li>3. Hello(null)0Friends</li> <li>4. Garbage value</li> </ol>
<pre>#include &lt;stdio.h&gt;  #include &lt;string.h&gt; int main()  {     char str1[]="IncludeHelp",str2[]=".Com"; printf("%s",str1+strlen(str2));    return 0;  }  Find the output</pre>	<ol style="list-style-type: none"> <li>1. IncludeHelp.Com</li> <li>2. udeHelp</li> <li>3. Error</li> <li>4. IncludeHelp4</li> </ol>

A mailer that transforms a message body of an e-mail into a web page is called a

1. Browser enriched mail client

**2. HTML-enabled mail client**

3. Rich Text mail client

4. client server mail client

```
#include <stdio.h> int main()
```

1. 44,44,300

```
{
```

2. 1,2,300

```
    union values
```

3. 2,2,300

```
    {
```

4. 256,256,300

```
        unsigned char a;        unsigned
```

```
char b;        unsigned int c;
```

```
    };
```

```
    union
```

```
    n
```

```
    value
```

```
    s val;
```

```
    val.a
```

```
    =1;
```

```
    val.b
```

```
    =2;
```

```
    val.c
```

```
    =300
```

```
    ;
```

```
    printf("%d,%d,%d",val.a,val.b,
```

```
    val.c);    return 0;
```

```
}
```

Find the output

<pre>#include &lt;stdio.h&gt; int main() {     char str[8]="Includ eHelp"; printf("%s",str );    return 0; }</pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li>1. IncludeHelp</li> <li>2. IncludeH</li> <li>3. <b>Error</b></li> <li>4. No output</li> </ol>
<pre>#include &lt;stdio.h&gt; #include &lt;string.h&gt;  int main() {     char str[]; strcpy( str,"Hello");  printf("%s ",str); return 0; }</pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li>1. Hello</li> <li>2. <b>Error</b></li> <li>3. NULL</li> <li>4. NO OUTPUT</li> </ol>
<pre>#includ e &lt;stdio.h</pre>	

<pre>&gt; #include &lt;string. h&gt; int main() {  i n t  v a l = 0 ;  char str[]="IncludeHelp.Com";  val=strcmp(str,"include help.com"); printf("%d",val); return 0; }</pre> <p>Find the output</p>	<p>1.</p> <p>0</p> <p>2.</p> <p>1</p> <p><b>3. -1</b></p> <p>4.</p> <p>Error</p>
--	--

Function templates can accept	<p>1. Only parameters of the basic type</p> <p>2. Only one parameter</p> <p>3. Any type of parameters</p> <p>4. Only parameters of the derived type</p>
<pre>#include &lt;stdio.h&gt; int main() {     int     a[5]={1,2,3,4,5},b[5]={10,20,30,40,50},tally;      for(tally=0;tally&lt; 5;++tally)         *(a+tally)=*(tally+a)+ *(b+tally);      for(tally=0;tally&lt; 5;tally++) printf("%d ",*(a+tally));      return 0; }</pre> <p>Find the output</p>	<p>1. 1 2 3 4 5</p> <p>2.</p> <p>10      20 30 40 50 3.</p> <p>11      22 33 44 55</p> <p>4. Error</p>

<pre>#inclu de &lt;stdio .h&gt; int main()  { static int array[]={10,20,30,40,50}; printf("%d...%d",*array,*(array+3)* *array);  return 0; }</pre> <p>Find the output</p>	<ul style="list-style-type: none"><li>1. Error</li><li>2. 10...40</li><li>3. 10...300</li><li>4. 10...400</li></ul>
---	---



<pre>#inclu de &lt;stdio .h&gt; int main()  { static int x[]={ 'A','B','C','D','E'},tally; for(tally=0;tally&lt; sizeof(x)/sizeof(int) ; tally+=1) printf("%c,%c,%c\n",*(x+tally)+1,x[tally ]+1,*(tally+x)+1) ; return 0; }  Find the output</pre>	<p>1. Error</p> <p>2. A,A,A</p> <p>B,B,B</p> <p>C,C,C</p> <p>D,D,D</p> <p>E,E,E</p> <p><b>3. B,B,B</b></p> <p><b>C,C,C</b></p> <p><b>D,D,D</b></p> <p><b>E,E,E</b></p> <p><b>F,F,F</b></p> <p>4. E,E,E</p> <p>D,D,D</p> <p>C,C,C</p> <p>B,B,B</p> <p>A,A,A</p>
<pre>class A { int a; static float b; }; What is the size of class A?</pre>	<p>1. sizeof( int ) * 2</p> <p><b>2. sizeof( int ) + sizeof( float )</b></p> <p>3. sizeof( int )</p> <p>4. sizeof( float )</p>
<pre>#include &lt;stdio.h&gt;</pre>	

<pre>#define MAX 10  int main() {     int array[MAX]={1,2,3},tally;     for(tally=0;tally&lt; sizeof(array)/sizeof(int);tally+=1) printf("%d ",*(tally+array));    return 0;  }</pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li>1. Error</li> <li>2. 1 3 4 5 6 7 8 9 10 11</li> <li>3. 1 2 3 0 0 0 0 0 0 0</li> <li>4. 0 0 0 0 0 0 0 0 0 0</li> </ol>
<p>Which of the following is shared between all of the threads in a process? Assume a kernel level thread implementation</p>	<ol style="list-style-type: none"> <li>1. Register values</li> <li>2. File descriptors</li> <li>3. Scheduler priority</li> <li>4. Local variables</li> </ol>
<pre>#include &lt;stdio.h&gt;  int main() {     int MAX=10;    int array[MAX];    printf("size of array is = %d",sizeof(array); return 0;  }</pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li>1. size of array is = 20</li> <li>2. size of array is = 40</li> <li>3. size of array is = 4</li> <li>4. Error</li> </ol>
<pre>#includ e &lt;stdio.</pre>	<ol style="list-style-type: none"> <li>1. 0 1 0 0 0</li> <li>2. 0 2 0 0 0</li> </ol>

<pre>h&gt; int main() { static int var[5]; int count= 0;      var[++count]=++count; for(count=0;count&lt;5;count++)      printf("%d ",var[count]);      return 0; }</pre> <p>Find the output</p>	<p><b>3.00200</b></p> <p>4.00000</p>
--	--------------------------------------

<pre>#incl ude &lt;stdi o.h&gt; #define ine TRU E 1 int mai n() {     int loop=10;    while(printf("Hello ") &amp;&amp; loop--); }</pre> <p>Find the output</p>	<p>1. Hello</p> <p>2. Hello Hello Hello Hello ... (infinite times)</p> <p>3. Hello (10 times)</p> <p><b>4. Hello (11 times)</b></p>
<pre>#include &lt;stdio.h&gt; void main()  {</pre>	

<pre> int cnt=1;  while(cnt&lt;=10)  {      printf("%d,",cnt);    cnt+=1;  }  printf("\nAfter loop cnt=%d",cnt); printf("\n");  } </pre> <p>Find the output</p>	<p>1. After loop cnt= 1</p> <p>2. 1, After loop cnt= 2</p> <p>3. After loop cnt= 2</p> <p>4. 11</p>
<pre> #include &lt;stdio.h&gt; void main()  {      int i,j,charVal='A';      for(i=5;i&gt;=1;i--)      {          for(j=0;j&lt; i;j++)            printf("%c ", (charVal+j)); </pre>	<p>1.</p> <p>A B C D E</p> <p>A B C D E</p> <p>A B C D E</p> <p>A B C D E</p> <p>A B C D E</p> <p>2.</p> <p>A B C D</p> <p>A B C D</p>

<pre>printf("\n"); } }</pre> <p>Identify the output</p>	<pre>A B C D A B C D 3. A B C D A B C A B A 4. A B C D E A B C D A B C A B A</pre>
<pre>#include &lt;stdio.h&gt; void main() {     int tally;     for(tally=0;tally&lt;10;++tally)     {         printf("#");         if(tally&gt;6)             continue;         printf("%d",tally);     } }</pre> <p>Find the output</p>	<pre>1. #0#1#2#3#4#5#6### 2. #0#1#2#3#4#5#6#7#8#9#10 3. #0#1#2#3#4#5##7#8#9#10 4. #0#1#2#3#4#5#</pre>

Find the output

```
#include <
stdio.h > int
main()
{
    int
tally=0;
for(;;)

    {

if(tally==10)
break;

    printf("%d ",++tally);
    }

    return 0;
}
```

1. 0 1 2 3 4 5 6 7 8 9 10

2. 1 2 3 ... infinte times

3. 2 3 4 5 6 7 8 9 10

4. 1 2 3 4 5 6 7 8 9

```
#include
<stdio.h> void
main()
{
```

```

int
i=1;
while
(i<=5)
{
    printf("%d",i);
    if
(i==5)
goto print;
i++;
}
fun()
{

p
r
i
n
t
:
    printf("includehelp.com");
}

```

Find the output

#include <stdio.h>

### 1. Error

2. 12345includehelp.com

3. 1234includehelp.com

4. 1includehelp.com 2includehelp.com

3includehelp.com 4includehelp.com

5includehelp.com



<pre>void main() { char cnt=0; for(;cnt++;printf("%d",cnt)) ; printf("%d",cnt); }</pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li>1 2 ... infinity</li> <li>2 2 2 ... 127</li> <li>0</li> <li><b>1</b></li> </ol>
<p>Consider the below code fragment:</p> <pre>if(fork k( ) == 0) { a= a+5; printf("%d, %d \n", a, &amp;a); } else { a= a ? 5; printf("%d %d \n", 0, &amp;a); }</pre> <p>Let u, v be the values printed by parent process and x, y be the values printed by child process. Which one of the following is true?</p>	<ol style="list-style-type: none"> <li>u= x + 10 and v = y</li> <li>u= x + 10 and v!= y</li> <li><b>u + 10= x and v = y</b></li> <li>u + 10= x and v != y</li> </ol>
<pre>#include &lt; stdio.h &gt; void main()  { unsigned char var=0; for(var=0;var&lt;=255;var++);  { printf("%d ",var); } }</pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li><b>0 1 2 ... 255</b></li> <li>255</li> <li>256</li> <li>blank screen as output</li> </ol>

<p>Which of the following is valid reason for collecting customer feedback concerning delivered software?</p>	<ol style="list-style-type: none"> <li>1. Do not allows developers to make changes to the delivered increment</li> <li>2. Delivery schedule can be revised to reflect changes</li> <li>3. Developers can not identify changes to incorporate into next increment</li> <li>4. Delivery schedule can't be revised to reflect changes</li> </ol>
<pre>#include &lt;stdio.h&gt; int main() {     char X[10]={'A'},i; for(i=0; i&lt;10; i++) printf("%d ",X[i]);  return 0; }</pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li>1. A 0 0 0 0 0 0 0 0 0</li> <li>2. A</li> <li>3. A 32 32 32 32 32 32 32 32 32</li> <li>4. Error</li> </ol>

```

#include
<stdio.h>
void main()
{
    i
    n
    t
    a
    =
    2
    ;
    int b=a;

    switch(b)
    {
        case a:
            printf("Case-a\n"); break; case
3:
            printf("Case-3\n"); break;
default:
            printf("No option\n"); break;
    }
    printf("Exit from switch");
}

```

Find the output

1. Case-2

**2. Error: case expression not constant**

3. Message

Case-2

4. Case-2

Case-3

Exit from switch

<pre>#include &lt;stdio.h&gt; void main(){      int a=1;     switch(a/2)      {          case NULL:      printf("Case NULL\n");              break;      case 0: printf("Case ZERO\n");      break; default:      printf("DEFAULT\n"); break;     }  }</pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li>1. Case NULL</li> <li>2. Case ZERO</li> <li>3. Case DEFAULT</li> <li>4. Error</li> </ol>
<pre>#include &lt;stdio.h&gt; void main()  {</pre>	

<pre> int a=2;  switch(a)  {     printf("Message\n");      default:          printf("Default\n");    case 2:          printf("Case-2\n");    case 3:          printf("Case-3\n"); }  printf("Exit from switch\n"); } </pre> <p>Find the output</p>	<p>1. Case-2</p> <p>2.</p> <p>Message</p> <p>3.</p> <p>Message</p> <p>Case-2</p> <p><b>4.</b></p> <p><b>Case-2</b></p> <p><b>Case-3</b></p> <p><b>Exit from switch</b></p>
<pre> #include &lt;stdio.h&gt;  int main() {     char *text="Hi Babs.";      char x=(char)(text[3]);      printf("%c\n",x);      return 0; } </pre> <p>Find the output</p>	<p>1. Garbage</p> <p><b>2. B</b></p> <p>3. Error</p> <p>4. Null</p>

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    char *text="Hi Babs.";
```

```
        char x=(char)(text+3);
```

```
        printf("%c\n",x);
```

```
        return 0;
```

```
}
```

Find the output

1. Garbage

2. B

**3. Error**

4. Null

#include <stdio.h>	1. 0
void main(){ static int staticVar;	2. 1
int j;	3. 2
for(j=0;j<=5;j+=2) switch(j){ case	4. Error
1: staticVar++; break;	
case 2:	
staticVar+	
=2;	
case 4:	
staticVar%	
=2;	
j=-1;	
continue;	
default:	
--	
staticVar;	
continue;	
}	
printf("%d",staticVar);	
}	

Find the output

<p>Find the output</p> <pre>#include &lt;stdio.h&gt;  int main() {   int x=65;     const unsigned     char c=(int)x;      printf("%c\n",c);      return 0; }</pre>	<p>1. Error</p> <p>2. 65</p> <p><b>3. A</b></p> <p>4. NULL</p>
<p>Find the output:</p> <pre>#include &lt;stdio.h&gt; int main() {     int a=100;     printf("%d\n"+1,a );   printf("Value is = %d"+3,a);     return 0; }</pre>	<p>1. Error</p> <p>2. 101,</p> <p>Value is = 103</p> <p><b>3. due is = 100</b></p> <p>4. 100</p> <p>100</p>



<p>What will be the output?</p> <pre>#include &lt;stdio.h&gt; int main() {     extern int ok;     printf("value of ok = %d",ok);     return 0; }  extern int ok=1000;</pre>	<p>1. Declaration Error</p> <p>2. <b>value of ok = 1000</b></p> <p>3. value of ok = 0</p> <p>4. Linking Error</p>
<p>Find the output:</p> <pre>#include &lt;stdio.h&gt; int main() {     int a=23;     ;     ;printf("%d",a);     ;     return 0; }</pre>	<p>1. <b>23</b></p> <p>2. Error</p> <p>3. ;23;</p> <p>4. ;23</p>

<pre>#include &lt;stdio.h&gt;  int main() {     int x=2.3;  const char c1=(float)x;  const char c2=(int)x;      printf("%d,%d\n",c1,c2);      return 0; }  Find the output</pre>	<ol style="list-style-type: none"> <li>1. Error</li> <li>2. 2.3,2</li> <li>3. 2.3000000,2</li> <li>4. 2,2</li> </ol>
<pre>#include &lt;stdio.h&gt; int main() {     int intVar=24;  static int x=intVar; printf("%d,%d",intVar,x);  return 0; }  Find the output of this program, (program name is: static_ec.c)</pre>	<ol style="list-style-type: none"> <li>1. 24, 24</li> <li>2. 24, 0</li> <li>3. Error: Illegal Initialization</li> <li>4. Run time error</li> </ol>

<pre>#include &lt;stdio.h&gt; void main()  {      short day=2;    switch(day)     {         case 2:    case 22:             printf("%d nd",day);    break; default:    printf("%d th",day); break;      } }</pre> <p>Find the output</p>	<p>1.        2 nd</p> <p>2.        22 nd</p> <p><b>3. Error</b></p> <p>4. 2 nd</p> <p>22 nd</p>
<pre>#include &lt;stdio.h&gt;  int main() {     float a,b;   a=3.0f;   b=4.0f; printf("%.0f,%.1f,%.2f",a/b,a/b,a/b); return 0;  }</pre> <p>Find the output.</p>	<p>1. 1, 0.8, 0.75</p> <p>2.0, 0.7, 0.75</p> <p><b>3. 0, 0.8, 0.75</b></p> <p>4. Error: Invalid format Specifier</p>

<pre>#include &lt;stdio.h&gt; void main()  {   int a=2;      switch(a/2*1.5)     {         case 1:             printf("One..."); break;    case 2: printf("Two...");    break; default:    printf("Other..."); break;      } }</pre> <p>Find the output</p>	<ol style="list-style-type: none"> <li>1. One...</li> <li>2. Two...</li> <li>3. Other...</li> <li><b>4. Error</b></li> </ol>
<pre>#include &lt;stdio.h&gt; int main() {   int a=15;   float b=1.234; printf("%*f",a,b);   return 0; }</pre> <p>Predict the output?</p>	<ol style="list-style-type: none"> <li>1. 1.234</li> <li><b>2. 1.234000</b></li> <li>3.      1.234000</li> <li>4. Error</li> </ol>

<p>PREDICT THE OUTPUT: #include</p> <pre>&lt;stdio.h&gt; void main()  {      int a=10,b=2,x=0;    x=a+b*a+10/2*a;     printf("value is =%d",x);  }</pre>	<p>1.Value is =1250</p> <p><b>2. Value is =80</b></p> <p>3. Value is =125</p> <p>4. Error</p>
<pre>#includ  e  &lt;stdio.  h&gt; int  main()  {  i  n  t  i  ;  for(i=0; i&lt; 5; i++)</pre>	

<pre> { if(i*i &gt; 30 ) goto lbl; else printf( "%d",i) ;   lbl:      printf("IHelp ");  }  return 0; } </pre> <p>Find the output</p>	<p>1. 0IHelp 1IHelp 2IHelp 3IHelp 4IHelp</p> <p>2.</p> <p>0IHelp 1IHelp 2IHelp 4IHelp</p> <p>3. 1IHelp</p> <p>4.</p> <p>Error</p>
<pre> #include e &lt;stdio. h&gt; int main() { </pre>	<p>1. 10</p> <p>2. 10L</p> <p>3. 10L10</p> <p>4. Error</p>

```
int
a=1
0;
if(1
0L
==
a)
prin
tf("
10L
");
else
if(1
0==
a)
prin
tf("
10")
;

els
e
pri
ntf(
"0"
);
ret
urn
0;
}
```

Find the output.

#includ	1. 00 01 02 03 04 2.
e	04 03 02 01 00
<stdio.	3. 04 03 02 01 4.
h> int	01 02 03 04
main()	
{ int a[5]={0x00,0x01,0x02,0x03,0x04},i;	
i=	
4;	
w	
hil	
e(	
a[i	
])	
{	
printf("%02d ",*a+i);	
--i;	
}	
return 0;	
}	
Find the output	



```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
int
```

```
a=10
```

```
;
```

```
int
```

```
b=2;
```

```
int
```

```
c;
```

```
c=(a & b);
```

```
printf("c= %d",c);
```

```
return 0;
```

```
}
```

```
Find the output.
```

1. c = 12 2.

c = 10

**3. c = 2**

4.c = 0

<pre>#include &lt;stdio.h&gt;  #define MOBILE 0x01 #define LAPPY 0x02  int main() {     unsigned char item=0x00;      item      =MOBILE;     item      =LAPPY;      printf("I have purchased     ...."); if(item &amp; MOBILE){         printf("Mobile, ");     }     if(item &amp; LAPPY){         printf("Lappy");     } }  return 1;</pre>	<p>1. I have purchased ...:</p> <p><b>2. I have purchased ...:Mobile, Lappy</b></p> <p>3. I have purchased ...:Mobile,</p> <p>4. I have purchased ...:Lappy</p>
<pre>#include &lt;stdio.h&gt;</pre>	

<pre> int main() {     char flag=0x0f;      flag &amp;= ~0x02;      printf("%d",flag);      return 0; } </pre> <p>Predict the Output.</p>	<div>1. 13</div> <div>2. d</div> <div>3. 22</div> <div>4. 10</div>
<pre> #include &lt;stdio.h&gt; int main() {     int     a     =     1     0     ; </pre>	

<pre> if(a==10) {  printf("Hello..."); break; printf("OK");  } else {     printf("Hii"); }  return 0; } </pre>	<p>1. Hello...</p> <p>2. Hello...OK</p> <p>3. OK...</p> <p>4. Error</p>
<p>Find the output.</p>	
<p>Find the output: #include &lt;stdio.h&gt; void main()</p> <pre> {  const char var='A';  ++var;  printf("%c",var);  } </pre>	<p>1. B</p> <p>2. A</p> <p>3. ERROR</p> <p>4. 66</p>
<pre> #include &lt;stdio.h&gt; int main()  { </pre>	

<pre> int pn=100;  if(pn&gt;20)  if(pn&lt;20)  printf("Heyyyyy");  else  printf("Hiiii");  return 0;  }  Find the output. </pre>	<p><b>1. No output</b></p> <p>2. Hiiii</p> <p>3. Heyyyyy</p> <p>4. HeyyyyyHiiii</p>
<pre> #include &lt;stdio.h&gt; int main()  {      if( (-100 &amp;&amp; 100)    (20 &amp;&amp; -20) )  printf("%s","Condition is true.");      else          printf("%s","Condition is  false.");  return 0;  }  Find the output </pre>	<p><b>1. Condition is True</b></p> <p>2. Condition is False</p> <p>3. No output</p> <p>4. Error</p>
<pre> #include  &lt;stdio.h&gt;  #define  TRUE 1  int main()  {  if(T  RU  E)  pri </pre>	<p>1.</p> <p>1</p> <p><b>2. Error</b></p> <p>3.</p> <p>2</p>

```
ntf(  
"1"  
);  
pri  
ntf(  
"2"  
);  
els  
e  
pri  
ntf(  
"3"  
);  
pri  
ntf(  
"4"  
);  
ret  
urn  
0;  
}
```

4.  
12

Find the output.

```
#include <stdio.h>
```

<pre>void main(){  int intVar=20,x; x= ++intVar,intVar++,++intVar; printf("Value of intVar=%d, x=%d",intVar,x); } Find the output</pre>	<p>1. Value of intVar=23, x=21</p> <p>2. Value of intVar=23, x=23</p> <p>3. Value of intVar=21, x=21</p> <p>4. ERROR</p>
<p>FIND THE OUTPUT:</p> <pre>#include &lt;stdio.h&gt; void main()  {     int x=10;  x+=(x++)+(++x)+x; printf("%d",x); }</pre>	<p>1. 44</p> <p>2. 45</p> <p>3. 46</p> <p>4. 47</p>
<pre>#include &lt;stdio.h&gt; void main(){ unsigned char c=290; printf("%d",c); }  Find the output</pre>	<p>1. 34</p> <p>2. 290</p> <p>3. Garbage value</p> <p>4. Error</p>
<pre>#include &lt;stdio.h&gt; void main(){      int a=0;     a=5 2 1;  printf("%d",a); }  Find the output.</pre>	<p>1. 2</p> <p>2. 1</p> <p>3. 0</p> <p>4. 8</p>

<pre>#include &lt;stdio.h&gt; int main() {     int var=250;    printf("value of var = %d\n",var);     200+50;     "includehelp.com"; printf("%s\n","includeh elp");    return 0; }  Find the output</pre>	<p>1. value of var = 250 includehelp.com</p> <p>2. value of var = 250</p> <p>includehelp</p> <p>3. Error</p> <p>4. value of var = 250</p> <p>Garbage</p>
<pre>#include &lt;stdio.h&gt; int main() {    int var;    var=- - 10;    printf("value of var= %d\n",var); var=+ +10; printf("value of var= %d\n",var);    return 0; }  Find the output</pre>	<p>1. ERROR</p> <p>2. value of var= -10 value of var= 10 3.</p> <p>value of var= 10 value of var= 10</p> <p>4.value of var= 10 value of var= 11</p>
<pre>#include &lt;stdio.h&gt;</pre>	



<pre>int main() {     int i=-1,j=-1,k=0,l=2,m;      m=i++&amp;&amp; j++&amp;&amp; k++    l+     +;    printf("%d %d %d     %d %d",i,j,k,l,m);      return 0; }</pre>	<p>1. 0 0 1 2 1</p> <p>2. 0 0 1 3 2</p> <p><b>3. 0 0 1 3 1</b></p> <p>4. 0 1 1 3 1</p>
Find the output	
<pre>#include &lt;stdio.h&gt; int main(){      int x;      x=100,30,50;    printf("x=%d\n",x); x=(100,30,50);    printf("x=%d\n",x);  return 0;  }</pre> <p>Find the output</p>	<p>1. x=100 x=100</p> <p><b>2. x=100 x=50</b></p> <p>3. x=50 x=50</p> <p>4. x=50 x=100</p>
#include <stdio.h>	

```
#define TRUE 1
```

```
int main()
```

```
{
```

```
    switch(TRUE)
```

```
    {
```

```
        printf("Hello");
```

```
    }
```

```
}
```

Find the output

1. Hello

2. ERROR

3. No output

4. Garbage

```
#include <stdio.h> void main()
```

```
{
```

```
    short a=2;    switch(a)
```

```
    {
```

```
        case 1L:    printf("One\n");
```

```
break;    case 2L:
```

```
printf("Two\n");    break;
```

```
default:    printf("Else\n");
```

```
break;
```

```
    }
```

```
}
```

Find the output

1. One

2. Two

3. Else

4. Error

<pre>#include &lt;stdio.h&gt; int main(){      float a;  (int)a= 10;  printf("value of a=%d",a);  return 0;  }</pre> <p>Find the output</p>	<p>1. value of a=10</p> <p>2. value of a=10.000000</p> <p>3. value of a=0</p> <p><b>4. L-Value required</b></p>
<pre>#include &lt;stdio.h&gt; int main(){  char val=250;  int ans;      ans= val+ !val + ~val + ++val; printf("%d",ans);  return 0;  }</pre>	<p>1. -5 <b>2. -6</b></p> <p>3.</p> <p>0</p> <p>4.</p>
<p>Find the output.</p>	<p>6</p>
<p>What is the output? #include</p> <pre>&lt;stdio.h&gt; void main()  {      int a=3,b=2;  a=a==b==0; printf("%d,%d",a,b);  }</pre>	<p><b>1. 1,2</b> 2. 3,2 3. 0,0 4.</p> <p>2,3</p>
<pre>#include &lt;stdio.h&gt;</pre>	

<pre> void main() {   int x;      x= (printf("AA")    printf("BB")); printf("%d",x);   printf("\n");      x= (printf("AA")&amp;&amp;printf("BB")); printf("%d",x); } </pre> <p>Find the output</p>	<p>1. AABB1 AABB1</p> <p>2. 1 1</p> <p>3. AABB1 AA1</p> <p>4. AA1 AABB1</p>
<p>Find the output: #include &lt;stdio.h&gt; void main()</p> <pre> {     int x=(20    40 ) &amp;&amp; (10);     printf("x= %d",x); } </pre>	<p>1. x= 60 2. x= 70</p> <p>3. x= 0 4. x= 1</p>
<p>Find the output:</p> <pre> #include &lt;stdio.h&gt;  void main()  {     char var=10;   printf("var is = %d",++var++); } </pre>	<p>1. ERROR: can not modify var.</p> <p>2. ERROR: L-Value required</p> <p>3. 12</p> <p>4. ERROR: Expression syntax</p>
<pre>#include &lt;stdio.h&gt;</pre>	

<pre>void main() {     unsigned short var='B';     var+=2;  var++;  printf("var : %c , %d ", var,var); }</pre> <p>Find the output</p>	<p>1. var : E, 69 2. var : E, 68 3. var : D, 69 4. var : D, 68</p>
<pre>#include &lt;stdio.h&gt; int main(){      int a,b,c;      a=0x10; b=010;  c=a+b;     printf("\nAddition is= %d",c);     return 0; }</pre> <p>Find the output.</p>	<p>1. Addition is = 20 2. Addition is = 24 3. Addition is = Garbage 4.</p>
	Error
<pre>#include &lt;stdio.h&gt;  enum numbers</pre>	

<pre> {     zero, one, two, three , four=3,five,six,seven=0,eight }; void main() {  printf("%d,%d,%d,%d,%d,%d,%d,%d,%d",zero, one,two,three,four,five,six,seven,eight); } What will be the output. </pre>	<p>1. 0, 1, 2, 3, 3, 4, 5, 0, 1</p> <p>2. 0, 1, 2,3,3,1,2,3,4</p> <p>3. 0,1,2,3,3,1,2,3,4</p> <p>4. 0, 1, 2, 3, 3, 4, 5, 0, 9</p>
<p>The number of tokens in the following C statement is</p> <pre>printf("i = %d, &amp;i = %x", i, &amp;i);</pre>	<p>1.</p> <p>3</p> <p>2. 10</p> <p>3. 26</p> <p>4.</p> <p>21</p>

<pre>#includ e &lt;stdio. h&gt; int main() {     int ok=-100;      -100; printf("% d",ok);     return 0; }</pre> <p>Find the output.</p>	<p>1.</p> <p>0</p> <p><b>2. -100</b></p> <p>3.</p> <p>100</p> <p>4. Error</p>
<pre>#incl ude &lt;stdi o.h&gt; int mai n(){ float a=12 5.50 ; int b=1 25.5</pre>	<p>1.</p> <p>4, 4, 4</p> <p>1, 4</p> <p>2.</p> <p>4, 4, 8</p> <p>1, 1</p> <p>3.</p> <p>4, 4, 4</p> <p>1, 1</p> <p><b>4.</b></p> <p><b>4, 4, 8</b></p> <p><b>1, 4</b></p>

<pre> 0;  char c='A' ;  printf("%d,%d,%d\n",sizeof(a),sizeof(b),size of(125.50)); printf("%d,%d\n",sizeof(c),sizeof(65)); return 0; }  What will be the output on a 32 bit compiler. </pre>	
<p>_____ states that it is Optimal Replacement algorithm</p>	<ol style="list-style-type: none"> <li>1. Replace the page that will not be used for a longest period of time</li> <li>2. Replace the page that will not be used for a shortest period of time</li> <li>3. Replace the page that will be used for a longest period of time</li> <li>4. Replace the page that will be used for a shortest period of time</li> </ol>
<p>In which mode FTP, the client initiates both the control and data connections.</p>	<p>1. active mode</p>



	<p>2. passive mode</p> <p>3. active mode and passive mode</p> <p>4.</p> <p>none of the mentioned</p>
Which of the following special symbol is allowed in a variable name?	<p>1. _ (underscore)</p> <p>2. - (hyphen)</p> <p>3.   (pipeline)</p> <p>4. * (asterisk)</p>
Consider an undirected graph G with 100 nodes. The maximum number of edges to be included is	1. 2451 2. 4950 3. 9900 4. 4851
The minimum number of arithmetic operations required to evaluate the polynomial $P(X) = X^5 + 4X^3 + 6X + 5$ for a given value of X using only one temporary variable is.	1. 6 2. 9 3. 8 4. 7
The stage delays in a 4-stage pipeline are 800, 500, 400 and 300 picoseconds. The first stage (with delay 800 picoseconds) is replaced with a functionally equivalent design involving two stages with respective delays 600 and 350 picoseconds. The throughput increase of the pipeline is _____ percent.	<p>1. 33</p> <p>2. 34</p> <p>3. 35</p> <p>4. 32</p>

Adding 1001 and 0010 gives	<p>1.</p> <p><b>1011</b></p> <p>2.</p> <p>1111</p>
	<p>3.</p> <p>0</p> <p>4.</p> <p>1010</p>
A wireless network interface controller can work in	<p>1. infrastructure mode</p> <p>2. ad-hoc mode</p> <p><b>3. both infrastructure and ad-hoc mode</b></p> <p>4. none</p>
Multiple object can be sent over a TCP connection between client and server in	<p>1. persistent HTTP</p> <p>2. nonpersistent HTTP</p> <p>3. both persistent HTTP and nonpersistent HTTP</p> <p>4. p-persistent HTTP</p>

What are the three Analysis models that depict software?	1. architecture, interface, component 2. cost, risk, schedule <b>3. Information, function, behavior</b> 4. NONE
Software prototyping helps to	1. generate code 2. provide thorough testing 3. explore possible software solutions <b>4. collect initial software requirements</b>
What is the most common approach for the development of application system now?	1. Incremental development <b>2. Agile</b> 3. Waterfall 4. None of the options
The design process related to data structures and their representation is	1. Architectural design 2. Interface design 3. Component design <b>4. Database design</b>
The segment number S is legal if	1. $S < STBR$ 2. $S > STBR$

	<p>3. <b>S &lt; STLR</b> 4.</p> <p>S &gt; STLR</p>
Which of the following is example of in-place algorithm?	<p>1. Bubble Sort</p> <p>2. Merge Sort</p> <p>3. <b>Insertion Sort</b></p> <p>4.</p>
Which one of the following is not correct?	<p>1. application layer protocols are used by both source and destination devices during a communication session</p> <p>2. application layer protocols implemented on the source and destination host must match</p> <p>3. <b>both the options</b></p> <p>4.</p>
In 8086 microprocessor the following has the highest priority among all type interrupts	<p>1. TYPE 255 2. DIV 0 3. <b>NMI</b> 4. OVER FLOW</p>
Assume that a mergesort algorithm in the worst case takes 30 seconds for an input of size 64. Which of the following most closely approximates the maximum input size of a problem that can be solved in 6 minutes?	<p>1. 256 2. 2048 3. 1024 4. <b>512</b></p>
A primary key, if combined with a foreign key creates	<p>1. Many to many relationships between the tables that connect them</p> <p>2. Network model</p>
	<p>between the tables connect them 3. one to many relationship between the tables that connect them 4. <b>Parent child relationship between the tables that connect them</b></p>

In wireless network an extended service set is a set of	<p>1. <b>connected basic service sets</b></p> <p>2.</p> <p>all stations</p> <p>3.</p> <p>all access points</p> <p>4.</p> <p>all nodes</p>
In binary heap, whenever the root is removed then the rightmost element of last level is replaced by the root. Why?	<p>1.<b>To make sure that it is still complete binary tree</b> 2.It is the easiest possible way 3.Because left and right subtree might be missing4.maximum value is contained by the root node</p>
Which of the following algorithm is Minimum Spanning Tree in graph	<p>1.Dijkstra's algorithm 2.AVL Tree algorithm</p> <p><b>3.Kruskal's algorithm</b>4.Merge algorithm</p>
If $X \rightarrow Y$ and $X \rightarrow Z$ then	<p>1. <math>Y \rightarrow Z</math></p> <p>2. <math>Z \rightarrow Y</math></p> <p><b>3. <math>X \rightarrow YZ</math></b></p> <p>4.</p> <p>Doesn't hold</p>
If $x \rightarrow y$ then $y \rightarrow x$ . This statement is	<p>1. True</p> <p><b>2.</b></p> <p><b>False</b></p>

	<p>3.</p> <p>Can't Say</p> <p>4.</p> <p>Doesn't hold</p>
<p>Given the functional dependencies, {AB → CDE and A → E}, for relation schema R = (A,B,C,D,E) we can infer the following:</p>	<p>1. is a key for R</p> <p>2. BE is a key for R</p> <p><b>3. AB is a key for R</b></p> <p>4. is a key for R</p>
<p>What kind of schema it is?</p> <p><i>Student(sid, sname, dob, address, pincode)</i></p>	<p><b>1. Relational</b></p> <p>2. Logical Schema</p> <p>3. Conceptual Schema</p> <p>4. External View</p>
<p>Which one of the following is currently the most popular data model?</p>	<p>1. Network Model</p> <p>2. Object Model 3. Notation Model</p> <p><b>4. Relational Model</b></p>
<p>Updating a database means</p>	<p>1. deleting database <b>2. modifying or adding record occurrences</b> 3. revising the file structure 4. reorganizing the database</p>
<p>In Ethernet when Manchester encoding is used, the bit rate is:</p>	<p><b>1. Half the baud rate.</b></p> <p>2. Twice the baud rate.</p> <p>3. Same as the baud rate.</p> <p>4. Grows exponentially</p>
<p>In interactive environments such as time-sharing systems, the primary requirement is to provide reasonably good response time and in general, to share system resources equitably. In such situations, the scheduling algorithm that is most popularly applied is _____.</p>	<p>1. Shortest Remaining Time Next (SRTN) Scheduling</p> <p>2. Priorities Based Preemptive Scheduling</p> <p><b>3. Round Robin Scheduling</b></p> <p>4. First Come First Serve</p>

A computer has a 256 KByte, 4-way set associative, write back data cache with block size of 32 Bytes. The processor sends 32 bit addresses to the cache controller. Each cache tag directory entry contains, in addition to address tag, 2 valid bits, 1 modified bit and 1 replacement bit. The size of the cache tag directory is	1. 11 2. 14 3. 27 <b>4. 16</b>
_____ programs automatically connects to web sites and download documents and save them to local drive	1. Web Servers <b>2. Web Downloading Utilities</b> 3. Stay Connected 4. Offline Browsers
What is the purpose of \$_SESSION[]?	1. Used to register a global variable 2. Used to initialize a session <b>3. Used to store variables of the current session</b> 4. Used to initialize a cookie
What is the correct way to connect to a MySQL database?	1. mysqli_db(host,username,password,db name); <b>2. mysqli_connect(host,username,password,dbname);</b> 3. mysqli_open(host,username,password,db name); 4. mysqli_connect(,,)
What does parseFloat(9+10) evaluates to in JavaScript?	<b>1.19</b> 2.910 3.9109 4.91
What will happen if the first argument of open() is omitted?	1.Error Page 2.Remains in the same page <b>3.about:blank</b> 4.Open the first page in the history
Which of the following can't be done with client-side JavaScript?	1.Validating a form 2.Sending a form's contents by email <b>3.Storing the form's contents to a database file on the server</b> 4.Testing the form
In javascript, RegExp Object Method test() is used to search a string and returns _____	<b>1.true or false</b> 2.found value 3.index 4.Matched or not matched

Let G be the CFG, l be the number of left most derivations, r be the number of right most derivations and P be the number of parse trees. Assume l, r and P are computed for a particular string. For a given CFG 'G' and given string 'w', what is the relation between l, P, r ?	<p>1. <b><math>l=P=r</math></b></p> <p>2. <math>l \leq P \geq r</math></p> <p>3. <math>l \geq P \leq r</math></p> <p>4. <math>l \leq P \leq r</math></p>
A value that has no defined value is expressed in PHP with the following keyword:	1.undef 2. <b>null</b> 3.Cant Define 4.There is no such concept in PHP
The Document object is which part of the object?	1.Tree 2.System 3. <b>Window</b> 4.Screen
<pre>#include &lt;stdio.h&gt; void main() {     int a=10;  switch(a){    case 5+5:         printf("Hello\n");    default:         printf("OK\n");     } }</pre> <p>Find the output</p>	<p>1. <b>Hello</b></p> <p>2. OK</p> <p>3. Hello</p> <p>OK</p> <p>4. Error</p>



<pre>#include &lt;iostream.h&gt; using namespace std; int main() { int x=20; if(!(!x)&amp;&amp;x) cout&lt;&lt;x; else { x=10; cout&lt;&lt;x; return 0; }&lt;/x;</pre>	<p>1. <b>20</b></p> <p>2. 10</p> <p>3.</p> <p>1</p> <p>4.</p> <p>0</p>
<pre>&lt;/x; }</pre>	
<p>The recognizing capabilities of NDFSM and DFSM</p>	<p>1. may be different</p> <p>2. must be different</p> <p><b>3. must be same</b></p> <p>4. none of the mentioned</p>
<p>Pre-emptive scheduling is the strategy of temporarily suspending a running process</p>	<p><b>1. before the CPU time slice expires</b></p> <p>2. to allow starving processes to run</p> <p>3. when it requests IO</p> <p>4. None of mentioned</p>

1. Software Specification is the process where	1. you decide what software you will use to program 2. you develop a prototype and show it to the client <b>3. You find out what services are required from the system</b> 4. none
1. What is an advantage of incremental delivery?	1. everything is coded at once, so the customer receives the full product 2. replacement systems are easily developed with full features that clients expected from the old system <b>3. Customers can use prototypes and gain experience that informs their requirements for later systems</b> 4. none of the mentioned
Manager salary details are hidden from the employee. This is	<b>1. Conceptual level data hiding</b> 2. Physical level data hiding 3. External level data hiding 4. None of mentioned
SELECT last_name, SYSDATE-hire_date FROM employees;	1. <b>Displays number of days an employee has worked in the company.</b> 2. Displays number of months an employee has worked in the company. 3. Error 4. None of the mentioned
The number of states in DFA is ----- the number of states in NFA for the same Language.	1. Greater then 2. equal to <b>3. less then</b> 4. greater then or equal to
The access method used for magnetic tape is _____	1. Direct 2. Random <b>3. Sequential</b> 4. None of these

The language that the computer can understand and execute is called _____	<b>1. Machine language</b> 2. Application software 3. System program 4. None of these
Syntax for creating a RegExp object: (i). var txt=new RegExp(pattern,modifiers); (ii). var txt=/pattern/modifiers; Which of the above mentioned syntax is correct?	1.(i) only 2.(ii) only <b>3.Both (i) and (ii)</b> 4 .None of these
A tree sturctured file directory system	<b>1. allows easy storage and retrieval of file names</b> 2. is not essential when we have millions of files 3. is a much debated unnecessary feature 4. none of these
Information retrieval is faster from	1. Floppy disk 2. Magnetic tape <b>3. Hard disk</b> 4. CD
A Winchester disk is a	<b>1. Disk stack</b> 2. Removable disk 3. Flexible disk 4. None of these
Computers use addressing mode techniques for _____.	1. giving programming versatility to the user by providing facilities as pointers to memory counters for loop control 2. to reduce no. of bits in the field of instruction 3. specifying rules for modifying or interpreting address field of the instruction <b>4. All of these</b>

The idea of cache memory is based	<p>1. on the property of locality of reference</p> <p>2. on the heuristic 90-10 rule</p> <p>3. on the fact that references generally tend to cluster</p> <p>4. all of these</p>
'Aging registers' are _____.	<p>1. Counters which indicate how long ago their associated pages have been referenced.</p> <p>2. Registers which keep track of when the program was last accessed</p> <p>3. Counters to keep track of last accessed instruction</p> <p>4. Counters to keep track of the latest data structures referred</p>
Virtual memory is the portion of _____.	<p>1. RAM</p> <p>2. Cache Memory</p> <p>3. Hard Disc</p> <p>4. None of these</p>