1. (c) ANSI & KR	What is the notation for following functions?
	
	1. `int f(int a, float b)`
	`{`
	`  /* Some code */`
	`}`
	
	2. `int f(a, b)`
	`int a; float b;`
	`{`
	`  /* Some code */`
	`}`
		1.
		1. KR Notation
		2. ANSI Notation
		
		2.
		1. Pre ANSI C Notation
		2. KR Notation
		
		3.
		1. ANSI Notation
		2. KR Notation
		
		4.
		1. ANSI Notation
		2. Pre ANSI Notation

2. (a) 1	What will be the output of the program ?
	
	``
	#include<stdio.h>
	void fun(int **p);
	
	int main()
	{
	    int a[3][4] = {1, 2, 3, 4, 4, 3, 2, 8, 7, 8, 9, 0};
	    int *ptr;
	    ptr = &a[0][0];
	    fun(&ptr);
	    return 0;
	}
	void fun(int **p)
	{
	    printf("%d\n", **p);
	}
	``
		1.
		1
		
		2.
		2
		
		3.
		3
		
		4.
		4

3. (b) 1,2,3,4	What will be the output of the program ?
	
	``
	#include<stdio.h>
	
	int main()
	{
	    void fun(int, int[]);
	    int arr[] = {1, 2, 3, 4};
	    int i;
	    fun(4, arr);
	    for(i=0; i<4; i++)
	``
		1.
		2, 3, 4, 5
		
		2.
		1, 2, 3, 4
		
		3.
		0, 1, 2, 3
		
		4.
		3, 2, 1 0

| | ```
      printf("%d,", arr[i]);
    return 0;
}
void fun(int n, int arr[])
{
    int *p=0;
    int i=0;
    while(i++ < n)
        p = &arr[i];
    *p=0;
}
``` | |
| 4.<br>(c) 1990 | What will be the output of the program in 16 bit platform (Turbo C under DOS)?<br><br>```
#include<stdio.h>

int main()
{
    int fun();
    int i;
    i = fun();
    printf("%d\n", i);
    return 0;
}
int fun()
{
    _AX = 1990;
}
``` | 1.<br>Garbage value<br><br>2.<br>0 (Zero)<br><br>3.<br>1990<br><br>4.<br>No output |
| 5.<br>(d) Compile Error | What will be the output of the program?<br><br>```
#include<stdio.h>
int check (int, int);

int main()
{
    int c;
    c = check(10, 20);
    printf("c=%d\n", c);
    return 0;
}
int check(int i, int j
``` | 1.<br>Print 10<br><br>2.<br>Print 20<br><br>3.<br>Print 1<br><br>4.<br>Compile error |

| | ```c
int *p, *q;
p=&i;
q=&j;
i>=45 ? return(*p): return(*q);
}
``` | |
| 6.
(d) k=38 | What will be the output of the program?

```c
#include<stdio.h>
int func1(int);

int main()
{
    int k=35;
    k = func1(k=func1(k=func1(k)));
    printf("k=%d\n", k);
    return 0;
}
int func1(int k)
{
    k++;
    return k;
}
``` | 1.
k=35

2.
k=36

3.
k=37

4.
k=38 |
| 7. (a) Hello | What will be the output of the program?

```c
#include<stdio.h>
int i;
int fun();

int main()
{
    while(i)
    {
        fun();
        main();
    }
    printf("Hello\n");
    return 0;
}
int fun()
{
    printf("Hi");
``` | 1.
Hello

2.
Hi Hello

3.
No output

4.
Infinite loop |

	}	
8. (d)Infinite Loop	What will be the output of the program? ```c #include<stdio.h> int reverse(int); int main() { int no=5; reverse(no); return 0; } int reverse(int no) { if(no == 0) return 0; else printf("%d,", no); reverse (no--); } ```	1. Print 5, 4, 3, 2, 1 2. Print 1, 2, 3, 4, 5 3. Print 5, 4, 3, 2, 1, 0 4. Infinite loop
9. (d) 25,4	What will be the output of the program? ```c #include<stdio.h> void fun(int*, int*); int main() { int i=5, j=2; fun(&i, &j); printf("%d, %d", i, j); return 0; } void fun(int *i, int *j) { *i = *i**i; *j = *j**j; } ```	1. 5, 2 2. 10, 4 3. 2, 5 4. 25, 4
10. (a) 9	What will be the output of the program? ```c #include<stdio.h> ```	1. 9 2. 10

| | ```c
int main()
{
    int fun(int);
    int i = fun(10);
    printf("%d\n", --i);
    return 0;
}
int fun(int i)
{
    return (i++);
}
``` | 3.<br>11<br><br>4.<br>8 |
| 11. (a) 123450 | ```c
#include <stdio.h>

void main()

{

    int a[2][3] = {1, 2, 3, 4, 5};

    int i = 0, j = 0;

    for (i = 0; i < 2; i++)

    for (j = 0; j < 3; j++)

    printf("%d", a[i][j]);

}
``` | 1.<br>123450<br>2.<br>12345junk<br>3.<br>123455<br><br>4.<br><br>Run time error |
| 12. (a) ptr is array of pointers to 10 integers | What does the following declaration mean?
int(*ptr)[10] | 1.
ptr is array of pointers to 10 integers |
| 13. (d) foo(x,y,z) | A function foo() is defined as | 1.
. foo(x, y) ;
2. |

	void foo(int a = 25, int b = 100)
	
	{ cout << a << b << endl; }
	
	Which one of the following function calls is illegal?
	(Assume x, y, z are declared as int)
		foo(x);
		3.
		foo(y, y) ;
		4.
		foo(x, y, z);

14. (b)	A reference is not the same as pointer, because	1. a reference can be null. 2. a reference once established cannot be changed. 3. a reference needs an explicit differencing mechanism. 4. they are one and the same.
15. ----	Protected base class visibility in public derivation is	1. public 2. private 3. private protected 4. protected
16. (a) generic programming	Template supports	1. generic programming 2. structured programming 3. procedural programming 4. object-oriented programming
17. (b) compilation error	The following C++ code results in #include "iostream.h"	1. runtime error 2. compilation error 3. no error 4.

		link time error

	void main(void)
	
	{
	
	cout (int a = 5) (int b = 6);
	
	}	

18. (a) prints 75,15	The following C++ program fragment
	
	#include <iostream.h>
	
	int a = 15;
	
	void main()
	
	{
	
	  int a = 25;
	
	{
	
	  int a = 75;
	
	cout << a << ", " << ::a;
	
	}
	
	}
		1.
		prints 75, 15
		2.
		prints 75, 25
		3.
		prints 15, 25
		4.
		
		results in run-time error

19. (a) static		1.

members	Virtual functions can not be	static members 2. derived 3. overridden 4. public members
20. (b) try-catch block	A block of statements which generate exceptions is	1. rethrow 2. try-catch block 3. catch 4. throw
21. (c) private	n C++ program, the fields in a class are by default	1. public 2. protected 3. private 4. global
22. (c) ad-hoc polymorphism	Overloading is otherwise called	1. virtual polymorphism 2. transient polymorphism 3. ad-hoc polymorphism 4. pseudo polymorphism
23. -------	The member function can find out of the object using "this"	1. variables 2. class 3. data types 4. address
24. -------	When an object is created to child class	1. Destructor is called 2. . First child class constructor is

		called 3. First base class constructor is called 4. Both are called simultaneously

25. (a)
compile time error
	The following program
	
	  void abc(int &p)
	
	  { cout << p;} void main(void)
	
	  {
	
	  float m = 1.23; abc(m);
	
	  cout << m;
	
	  }
		1.
		results in compile time error
		2.
		prints 1.23
		3.
		results in run time error
		4.
		
		prints 1

26. (c) 6 6 6	#include<iostream>
	union _uni
	{
	int i;
	int j;
	int k;
	};
	int main()
	{
	_uni uno;
	uno.i = 4;
	uno.j = 5;
	uno.k = 6;
	std::cout << uno.i<<uno.j<< uno.k;
		1.
		4 5 6
		2.
		Error cant access variables i ,j,k.
		3.
		6 6 6
		4.
		6 5 4

	}	
27. (b) w/o using the same address space	Interprocess communication	1. allows processes to communicate and synchronize their actions when using the same address space 2. allows processes to communicate and synchronize their actions without using the same address space 3. allows the processes to only synchronize their actions without communication 4. none of the mentioned
28. (b) Atomicity	……… property will check whether all the operation of a transaction completed or none.	1.Consistency 2.Atomicity 3.Durability4.Isolation
29. (b) Candidate Key	------ is the minimal super key	1.Partial Key 2.Candidate Key 3.Surrogate Key 4.Unique Key
30. (c) tBlastx	--------------- program is used to search translated nucleotide query against translated nucleotide database.	1.BLASTx 2. tBLASTn 3.tBLASTx 4.None of the above
31. (b) Multiple inheritance	. ------------------- is not supported by java.	1. Interface 2. Multiple Inheritance 3. Hierarchical Inheritance 4. Multi-level Inheritance
32. (d) 25,25 and 24	1. A processor uses 36-bit physical addresses and 32-bit virtual addresses, with a page frame size of 4 Kbytes. Each page table entry is of size 4 bytes. A three-level page table is used for virtual to physical address translation, where the virtual address is used as follows • Bits 30-31 are used to index into the first level page table • Bits 21-29 are used to index into the second level page table • Bits 12-20 are used to index into the third level page table, and • Bits 0-11 are used as offset within the page The number of bits required for addressing the next level page table (or page frame) in the page table	1. a. 20, 20 and 20 2. 24, 24 and 24 3. a. 24, 24 and 20 4. a. 25, 25 and 24

	entry of the first, second and third level page tables is respectively	
33. (b) 2^n-1	1. A process executes the following code for (i = 0; i < n; i++) fork(); The total number of child processes created is	1. N 2. $2^n - 1$ 3. 2^n 4. $2^{(n+1)} - 1$
34. (c)	1. Consider the 3 processes, P1, P2 and P3 shown in the table Process Arrival time Time unit required P1 0 5 P2 1 7 P3 3 4 The completion order of the 3 processes under the policies FCFS and RRS (round-robin scheduling with CPU quantum of 2 time units) are	1. a. FCFS: P1, P2, P3 RR2: P1, P2, P3 2. a. FCFS: P1, P3, P2 RR2: P1, P3, P2 3. a. FCFS: P1, P2, P3 RR2: P1, P3, P2 4. a. FCFS: P1, P3, P2 RR2: P1, P2, P3
35. (a) 5.0 ms	1. Consider the following table of arrival time and burst time for three processes P0, P1 and P2. Process Arrival time Burst Time P0 0 ms 9 ms P1 1 ms 4 ms P2 2 ms 9 ms The pre-emptive shortest job first scheduling algorithm is used. Scheduling is carried out only at arrival or completion of processes. What is the average waiting time for the three processes?	1. 5.0 ms 2. 4.33 ms 3. 6.33 ms 4. 7.33 ms
36. (d) an extension of indexed allocation	1. The data blocks of a very large file in the Unix file system are allocated using	1. a. contiguous allocation 2. a. linked allocation 3. a. indexed allocation 4. a. an extension of indexed allocation
37. (a) deadlock	1. Which of the following is NOT true of deadlock prevention and deadlock avoidance schemes?	1. a. In deadlock prevention, the request for resources is always

prevention		granted if the resulting state is safe. 2. a. In deadlock avoidance, the request for resources is always granted if the result state is safe 3. a. Deadlock avoidance is less restrictive than deadlock prevention 4. a. Deadlock avoidance requires knowledge of resource requirements a priori
38. (d) I, II and III	1. Which of the following statements are true? I. Shortest remaining time first scheduling may cause starvation II. Preemptive scheduling may cause starvation III. Round robin is better than FCFS in terms of response time	1. a. I only 2. a. I and III only 3. a. II and III only 4. a. I, II and III

39. (c) Compilation fails	1.What will be the output of the program?
	
	class A
	
	{
	
	  final public int GetResult(int a, int b) { return 0; }
	
	}
	
	class B extends A
	
	{
	
	  public int GetResult(int a, int b) {return 1; }
	
	}
	
	public class Test
	
	{
	
	  public static void main(String args[])
	
	  {
	
	    B b = new B();
	
	    System.out.println("x = " + b.GetResult(0, 1));
	
	  }
	
	}
		1.
		    X=0
		2.
		     x=1
		3.
		    Compilation fails
		4.
		    An exception is thrown at runtime

40. (c) 3 and 4	interface Base	1. 1 and 2

	{
	
	   boolean m1 ();
	
	   byte m2(short s);
	
	}
	
	which two code fragments will compile?
	
	  1. interface Base2 implements Base {}.
	
	  2. abstract class Class2 extends Base
	
	    { public boolean m1(){ return true; }}
	
	     3. abstract class Class2 implements Base {}
	
	  4. abstract class Class2 implements Base
	   { public boolean m1(){ return (7 > 4); }}.
	
	  5. abstract class Class2 implements Base
	{ protected boolean m1(){ return (5 > 7) }}
		2.
		2 and 3
		3.
		3 and 4
		4.
		1 and 5

41. (c) P2	1. A single processor system has three resource types X, Y and Z, which are shared by three processes. There are 5 units of each resource type. Consider the following scenario, where the column allocation denotes the number of units of each resource type allocated to each process, and the column request denotes the number of units of each resource type requested by a process in order to complete execution. Which of these processes will finish LAST?
	
	       Allocation Request
	
	             X Y Z X Y Z
	
	       P0 1 2 1 1 0
	3
		1.
		P0
		2.
		P1
		3.
		P2
		4.
		a. None of the above, since the system is in a deadlock

	P1 2 0 1 0 1 2	
	P2 2 2 1 1 2 0	
42. (a) 196	1. 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 then accesses the same 100 pages but now in the reverse order. How many page faults will occur?	1. a. 196 2. a. 192 3. a. 197 4. a. 195
43. (a) only one	1. For any type of access, contiguous allocation requires _____ access to get a disk block.	1. a. only one 2. a. at least two 3. a. exactly two 4. a. none of the mentioned
44. (b) when the page is not in memory	1. Page fault occurs when	1. a. When a requested page is in memory 2. a. When a requested page is not in memory 3. a. When a page is corrupted 4. a. When an exception is thrown
45. (b) limit on max no.	1. A fork system call will fail if :	1. a. the previously executed statement is also a fork call 2. a. the limit on the maximum number of processes in the system would be executed 3. a. the limit on the minimum number of processes that can be under execution by a single user would be executed 4. a. all of the mentioned
46. (a) normally	1. Cascading termination refers to termination of all child processes before the parent terminates	1. a. Normally 2. a. Abnormally 3.

		a. Normally or abnormally 4. a. None of these

47. (a) mutual exclusion but not progress	1. Consider the methods used by processes P1 and P2 for accessing their critical sections whenever needed, as given below. The initial values of shared boolean variables S1 and S2 are randomly assigned.
	
	Method Used by P1
	
	while (S1 == S2) ;
	
	Critica1 Section
	
	S1 = S2;
	
	Method Used by P2
	
	while (S1 != S2) ;
	
	Critica1 Section
	
	S2 = not (S1);
	
	Which one of the following statements describes the properties achieved?
		1.
		a. Mutual exclusion but not progress
		2.
		Progress but not mutual exclusion
		3.
		a. Neither mutual exclusion nor progress
		4.
		Both mutual exclusion and progress

48. (c)	1. A computer system supports 32-bit virtual addresses as well as 32-bit physical addresses. Since the virtual address space is of the same size as the physical address space, the operating system designers decide to get rid of the virtual memory entirely. Which one of the following is true?	1. a. Efficient implementation of multi-user support is no longer possible 2. a. The processor cache organization can be made more efficient now 3. a. Hardware support for memory management is no longer needed 4. a. CPU scheduling can be made more efficient now
49. (b) 30ns	1. Let the page fault service time be 10ms in a computer with average memory access time being 20ns. If one page fault is generated for every 10^6 memory accesses, what is the effective access time for the memory?	1. a. 21ns 2. a. 30ns 3. 23ns 4. a. 35ns

| 50. (a) 6 | What is the output of the following code?

```c
int cnt = 0;
void my_recursive_function(char *s, int i)
{
   if(s[i] == '\0')
     return;
   if(s[i] == 'a' || s[i] == 'e' || s[i] == 'i' || s[i] == 'o' || s[i] == 'u')
   cnt++;
   my_recursive_function(s,i+1);
}
int main()
{
   my_recursive_function("thisisrecursion",0);
   printf("%d",cnt);
   return 0;
}
``` | 1.
6
2.
9
3.
5
4.
10 |
| 51. (b) 4 | What is the output of the following code?

```c
void my_recursive_function(int *arr, int val, int idx, int len)
{
  if(idx == len)
  {
    printf("-1");
    return ;
  }
  if(arr[idx] == val)
  {
``` | 1.
3
2.
4
3.
5
4.
6 |

	``
	        printf("%d",idx);
	
	        return;
	
	     }
	
	     my_recursive_function(arr,val,idx+1,len);
	
	  }
	
	  int main()
	
	  {
	
	     int array[10] = {7, 6, 4, 3, 2, 1, 9, 5, 0, 8};
	
	     int value = 2;
	
	     int len = 10;
	
	     my_recursive_function(array, value, 0, len);
	
	     return 0;
	
	  }
	``	

52. (d) 10 9 8.... 1	What is the output of the following code?
	
	``
	void my_recursive_function(int n)
	
	{
	
	   if(n == 0)
	
	      return;
	
	   printf("%d ",n);
	
	   my_recursive_function(n-1);
	
	}
	
	int main()
	
	{
	
	   my_recursive_function(10);
	
	   return 0;
	
	}
	``
		1.
		10
		2.
		1
		3.
		10 9 8 … 1 0
		4.
		10 9 8 … 1

53. (d) 9	What will be the output of the following code?
	
	``
	int cnt=0;
	
	void my_recursive_function(int n)
	
	{
	
	   if(n == 0)
	``
		1.
		123456789
		
		2.
		10
		3.
		0

		4. 9
| | ```
  return;
  cnt++;
  my_recursive_function(n/10);
}
int main()
{
  my_recursive_function(123456789);
  printf("%d",cnt);
  return 0;
}
``` | |
| 54. (d)<br>slipstream slip<br>stream | What will be the output of the program?<br><br>```
class PassS
{
  public static void main(String [] args)
  {
    PassS p = new PassS();
    p.start();
  }

  void start()
  {
    String s1 = "slip";
    String s2 = fix(s1);
    System.out.println(s1 + " " + s2);
  }

  String fix(String s1)
  {
    s1 = s1 + "stream";
``` | 1.<br>slip stream<br>2.<br>slipstream stream<br>3.<br>stream slip stream<br>4.<br>slipstream slip stream |

	System.out.print(s1 + " "); return "stream"; } }	

55. (b) 7 14	What will be the output of the program?class Test
	
	 {
	
	 static int s;
	
	 public static void main(String [] args)
	
	 {
	
	 Test p = new Test();
	
	 p.start();
	
	 System.out.println(s);
	
	 }
	
	 void start()
	
	 {
	
	 int x = 7;
	
	 twice(x);
	
	 System.out.print(x + " ");
	
	 }
	
	 void twice(int x)
	
	 {
	
	 x = x*2;
	
	 s = x;
	
	 }
	
	 }
		1.
		 7 7
		 2.
		 7 14
		 3.
		 14 0
		 4.
		 14 14

56. (d) i=5 and j=6	What will be the output of the program?int i = 1, j = 10;
	
	 do
	
	 {
	
	 if(i > j)
		1.
		 $i = 6$ and $j = 5$
		 2.
		 $i = 5$ and $j = 5$
		 3.
		 $i = 6$ and $j = 4$
		 4.

| | ```
{
    break;
}
  j--;
} while (++i < 5);
System.out.println("i = " + i + " and j = " + j);
``` | $i = 5$ and $j = 6$ |
| 57. (d) j=6 | What will be the output of the program?public class Test

```
{
    public static void main(String args[])
    {
        int i = 1, j = 0;
        switch(i)
        {
            case 2: j += 6;
            case 4: j += 1;
            default: j += 2;
            case 0: j += 4;
        }
        System.out.println("j = " + j);
    }
}
``` | 1.
$j = 0$
2.
$j = 2$
3.
$j = 4$
4.
$j = 6$ |
| 58. 10 30 40 15 | After performing these set of operations, what does the final list look contain in dequeue?

InsertFront(10);

InsertFront(20);

InsertRear(30);

DeleteFront();

InsertRear(40);

InsertRear(10);

DeleteRear(); | 1.
10 30 10 15
2.
20 30 40 15
3.
20 30 40 10
4.
10 30 40 15 |

	InsertRear(15); display();	

59. (b)	What is the functionality of the following piece of code? Select the most appropriate
	
	public void function(int data)
	
	{
	
	    int flag = 0;
	
	    if(head != null)
	
	    {
	
	        Node temp = head.getNext();
	
	        while((temp != head) && (!(temp.getItem() == data)))
	
	        {
	
	            temp = temp.getNext();
	
	            flag = 1;
	
	            break;
	
	        }
	
	    }
	
	    if(flag)
	
	        System.out.println("success");
	
	    else
	
	        System.out.println("fail");
	
	}
		1.
		Print success if a particular element is not found
		2.
		Print fail if a particular element is not found
		3.
		Print success if a particular element is equal to 1
		4.
		Print fail if the list is empty

60. (b) display the list	What is the functionality of the following piece of code?
	
	public void display()
	
	{
	
	    if(size == 0)
	
	        System.out.println("underflow");
	
	    else
		1.
		reverse the list
		2.
		display the list
		3.
		display the list excluding top-of-the-stack-element
		4.
		reverse the list excluding top-of-the-stack-element

| | ```
{
        Node current = first;
        while(current != null)
        {
                System.out.println(current.getEle());
                current = current.getNext();
        }
    }
}
``` | |
| 61. (d) 1 3 5 5 3 1 | What is the output of the following function for start pointing to the first node of following linked list?

1->2->3->4->5->6

void fun(struct node* start)

{

  if(start == NULL)

  return;

  printf("%d ", start->data);

  if(start->next != NULL)

  fun(start->next->next);

  printf("%d ", start->data);

} | 1.
1 4 6 6 4 1
2.
1 3 5 1 3 5
3.
1 2 3 5
4.
1 3 5 5 3 1 |
| 62. (d) false true | What is the output of this program?

  class string_class

  {

    public static void main(String args[])

    {

      String obj = "hello";

      String obj1 = "world";

      String obj2 = "hello";

      System.out.println(obj.equals(obj1) + " " + | 1.
false false
2.
true true
3.
true false

4.
false true |

	obj.equals(obj2)); } }	

63. (b)	What does the following function do for a given Linked List with the first node as a head?
	
	void fun1(struct node* head)
	
	{
	
	  if(head == NULL)
	
	  return;
	
	  fun1(head->next);
	
	  printf("%d ", head->data);
	
	}
		1.
		Prints all nodes of linked lists
		2.
		Prints all nodes of linked list in reverse order
		3.
		Prints alternate nodes of Linked List
		4.
		Prints alternate nodes in reverse order

64. (a) First fit, Best Fit	1. _____ and _____ are the most common strategies used to select a free hole from the set of available holes.	1. a. First fit, Best fit 2. a. Worst fit, First fit 3. a. Best fit, Worst fit 4. a. None of the mentioned
65. (b)	1. A multilevel page table is preferred in comparison to a single level page table for translating virtual address to physical address because	1. a. It reduces the memory access time to read or write a memory location. 2. a. It helps to reduce the size of page table needed to implement the virtual address space of a process. 3. a. It is required by the translation lookaside buffer. 4. a. It helps to reduce the number of page faults in page replacement algorithms.
66. (a)	1. A relative block number is an index relative to	1. a. the beginning of the file 2. a. the end of the file 3. a. the last written position in file

		4. a. none of the mentioned
67. (b)	1. A virtual memory system uses First In First Out (FIFO) page replacement policy and allocates a fixed number of frames to a process. Consider the following statements: P: Increasing the number of page frames allocated to a process sometimes increases the page fault rate. Q: Some programs do not exhibit locality of reference. Which one of the following is TRUE?	1. a. Both P and Q are true, and Q is the reason for P 2. a. Both P and Q are true, but Q is not the reason for P. 3. a. P is false, but Q is true 4. a. Both P and Q are false.
68. (c) 2 MB	1. Consider a machine with 64 MB physical memory and a 32-bit virtual address space. If the page size is 4KB, what is the approximate size of the page table?	1. a. 16 MB 2. a. 8 MB 3. a. 2 MB 4. a. 24 MB
69. (c)	1. Consider a virtual memory system with FIFO page replacement policy. For an arbitrary page access pattern, increasing the number of page frames in main memory will	1. Always decrease the number of page faults 2. a. Always increase the number of page faults 3. a. Sometimes increase the number of page faults 4. Never affect the number of page faults
70. (b)	1. Consider the virtual page reference string 1, 2, 3, 2, 4, 1, 3, 2, 4, 1 On a demand paged virtual memory system running on a computer system that main memory size of 3 pages frames which are initially empty. Let LRU, FIFO and OPTIMAL denote the number of page faults under the corresponding page replacements policy. Then	1. a. OPTIMAL < LRU < FIFO 2. a. OPTIMAL < FIFO < LRU 3. a. OPTIMAL = LRU 4. a. OPTIMAL = FIFO
71. (a)	File system fragmentation occurs when	1. a. unused space or single file is not contiguous 2. a. used space is not contiguous 3. a. unused space is non-contiguous

		4. a. multiple files are non-contiguous
72. (c)	1. In a system with 32 bit virtual addresses and 1 KB page size, use of one-level page tables for virtual to physical address translation is not practical because of	1. a. a large amount of internal fragmentation 2. a. the large amount of external fragmentation 3. a. the large memory overhead in maintaining page tables 4. a. the large computation overhead in the translation process
73. (b)	1. In tree structure, when deleting a directory that is not empty :	1. a. The contents of the directory are safe 2. a. The contents of the directory are also deleted 3. a. contents of the directory are not deleted 4. a. none of the mentioned
74. (d) 1.999 micro sec	1. Suppose the time to service a page fault is on the average 10 milliseconds, while a memory access takes 1 microsecond. Then a 99.99% hit ratio results in average memory access time of	1. a. 1.9999 milliseconds 2. a. 1 millisecond 3. a. 9.999 microseconds 4. a. 1.9999 microseconds
75. (a)	1. The minimum number of page frames that must be allocated to a running process in a virtual memory environment is determined by	1. a. the instruction set architecture 2. a. page size 3. a. physical memory size 4. a. number of processes in memory
76. (b)	1. The real disadvantage of a linear list of directory entries is the	1. a. size of the linear list in memory 2. a. linear search to find a file 3.

			a. it is not reliable
			4.
			a. all of the mentioned
77. (c)	1. What is the mounting of a file system?		1.
			a. creating of a file system
			2.
			a. deleting a file system
			3.
			a. attaching the portion of the file system into a directory structure
			4.
			a. removing the portion of the file system into a directory structure
78. (d)	1. When two users keep a subdirectory in their own directories, the structure being referred to is :		1.
			a. tree structure
			2.
			a. cyclic graph directory structure
			3.
			a. Two level directory structure
			4.
			a. acyclic graph directory
79. (a)	1. Which file is a sequence of bytes organized into blocks understandable by the system's linker?		1.
			a. object file
			2.
			a. source file
			3.
			a. executable file
			4.
			a. text file
80. (c)	You are given pointers to first and last nodes of a singly linked list, which of the following operations are dependent on the length of the linked list?		1. Delete the first element
			2. Insert a new element as a first element
			3. Delete the last element of the list
			4. Add a new element at the end of the list
81. (c)	Queues serve a major role in		1. Simulation of recursion
			2. Simulation of arbitrary linked list
			3. Simulation of limited resource allocation
			4. Simulation of Processes

82. (a)	The given array is arr = {2,3,4,1,6}. What are the pivots that are returned as a result of subsequent partitioning?	1. 1 and 3 2. 3 and 1 3. 2 and 6 4. 6 and 2
83. (d)	What is the best case complexity of selection sort?	1. O(nlogn) 2. O(logn) 3. O(n) 4. O(n2)
84. (d)	What kind of linked list is best to answer a question like "What is the item at position n?"	1. Singly linked list 2. Doubly linked list 3. Circular linked list 4. Array implementation of linked list
85. (d) stack	Which of the following data structures can be used for parentheses matching?	1. n-ary tree 2. queue 3. priority queue 4. stack
86. (c) Dequeue	A data structure in which elements can be inserted or deleted at/from both the ends but not in the middle is?	1. Queue 2. Priority Queue 3. Dequeue 4. Circular Queue
87. (a)	A normal queue, if implemented using an array of size MAX_SIZE, gets full when	1. rear = MAX_SIZE – 1 2. front = (rear + 1)mod MAX_SIZE 3. front = rear + 1 4. rear = front

88. (c) I,II and III	Consider an implementation of unsorted singly linked list. Suppose it has its representation with a head pointer only. Given the representation, which of the following operation can be implemented in O(1) time? i) Insertion at the front of the linked list ii) Insertion at the end of the linked list iii) Deletion of the front node of the linked list iv) Deletion of the last node of the linked list	1. I and II 2. I and III 3. I, II and III 4. I, II and IV
89. (c)	Consider the usual algorithm for determining whether a sequence of parentheses is balanced. The maximum number of parentheses that appear on the stack AT ANY ONE TIME when the algorithm analyzes: (()(())(())) are	1. 1 2. 2 3. 3 4. 4 or more
90. (d)	Entries in a stack are "ordered". What is the meaning of this statement?	1. A collection of stacks is sortable 2. Stack entries may be compared with the '<' operation 3. The entries are stored in a linked list 4. There is a Sequential entry that is one by one
91. (a)	Given pointer to a node X in a singly linked list. Only one pointer is given, a pointer to head node is not given, can we delete the node X from given linked list?	1. Possible if X is not the last node 2. Possible if a size of linked list is even 3. Possible if a size of linked list is odd 4. Possible if X is not the first node
92. (d)	Here is an infix expression: 4 + 3*(6*3-12). Suppose that we are using the usual stack algorithm to convert the expression from infix to postfix notation. The maximum number of symbols that will appear on the stack AT ONE TIME during the conversion of this expression?	1. 1 2. 2 3. 3 4. 4
93. (b)	In a circular queue, how do you increment the rear end of the queue?	1. rear++ 2. (rear+1) % CAPACITY 3.

		(rear % CAPACITY)+1 4. rear--
94. (c)	In the following scenarios, when will you use selection sort?	1. The input is already sorted 2. A large file has to be sorted 3. Large values need to be sorted with small keys 4. Small values need to be sorted with large keys
95. (d)	In the worst case, the number of comparisons needed to search a singly linked list of length n for a given element is	1. log2 n 2. n/2 3. log2 n – 1 4. n
96. (c)	Linked list data structure offers considerable saving in	1. Computational Time 2. Space Utilization 3. Space Utilization and Computational Time 4. Running time
97. (d) Binary Search	Linked lists are not suitable for the implementation of?	1. Insertion sort 2. Radix sort 3. Polynomial manipulation 4. Binary search
98. (d) 2	Minimum number of queues to implement stack is _____	1. 3 2. 4 3. 1 4. 2
99. (b) Divide and Conquer	QuickSort can be categorized into which of the following?	1. Brute Force technique

		2. Divide and conquer 3. Greedy algorithm 4. Dynamic programming
100. (c) queue	The data structure required for Breadth-First Traversal on a graph is?	1. Stack 2. Array 3. Queue 4. Tree
101. (d) None	The given array is arr = {2,6,1}. What are the pivots that are returned as a result of subsequent partitioning?	1. 1 and 6 2. 6 and 1 3. 2 and 6 4. None
102. (a) 5 and 4	The given array is arr = {3,4,5,2,1}. The number of iterations in bubble sort and selection sort respectively are,	1. 5 and 4 2. 4 and 5 3. 2 and 4 4. 2 and 5
103. (d) Stack	The process of accessing data stored in a serial access memory is similar to manipulating data on a _____	1. Heap 2. Binary tree 3. rray 4. Stack
104. (c)	What is the advantage of bubble sort over other sorting techniques?	1. It is faster 2. Consumes less memory 3. Detects whether the input is already sorted 4.

		It is not scalable
105. (a)	What is the need for a circular queue?	1. Effective usage of memory 2. easier computations 3. Fast Compilations 4. Traversing
106. (a) X	What is the result of the following operation? Top (Push (S, X))	1. X 2. NULL 3. S 4. S and X
107. should be -18	What is the value of the postfix expression 6 3 2 4 + – * ?	1. between -5 and -15 2. between 5 and -5 3. between 5 and 15 4. between 15 and 100

108. should be "Array"	What kind of linked list is best to answer question like "What is the item at position n?"	1.
		Singly linked list
		2.
		ptr = (NODE*)malloc(NODE);
		3.
		ptr = (NODE*)malloc(sizeof(NODE*));
		4.
		ptr = (NODE)malloc(sizeof(NODE));

109. (c) O(n)	What would be the asymptotic time complexity to find an element in the linked list?	1. O(1) 2. O(n) 3. O(n2) 4. θ(1)
110. (c)	Which of the following application makes use of a circular linked list?	1. Undo operation in a text editor 2. Recursive function calls 3. Allocating CPU to resources

		4. deallocation
111. (c)	Which of the following is not an application of priority queue?	1. Huffman codes 2. Interrupt handling in operating system 3. Undo operation in text editors 4. Bayesian spam filter
112. (d) Merge Sort	Which of the following sorting algorithms can be used to sort a random linked list with minimum time complexity?	1. Insertion Sort 2. Quick Sort 3. Heap Sort 4. Merge Sort
113. (d)	What is the advantage of selection sort over other sorting techniques?	1. It is scalable 2. It works best for inputs which are already sorted 3. It is faster than any other sorting technique 4. It requires no additional storage space
114. (a) O(n)	What is the best case efficiency of bubble sort in the improvised version?	1. O(nlogn) 2. O(logn) 3. O(n) 4. O(n2)
115. (b)	Consider a small circular linked list. How to detect the presence of cycles in this list effectively?	1. Keep one node as head and traverse another temp node till the end to check if its 'next points to head 2. Have fast and slow pointers with the fast pointer advancing two nodes at a time and slow pointer advancing by one node at a time 3.

		Cannot determine, you have to pre-define if the list contains cycles 4. Keep traversing the list
116. (b)	What is an internal sorting algorithm?	1. An algorithm that uses tape or disk during the sort 2. An algorithm that uses main memory during the sort 3. An algorithm that involves swapping 4. An algorithm that is considered 'in place'
117. (d) cannot determine	What is not a disadvantage of priority scheduling in operating systems?	1. A low priority process might have to wait indefinitely for the CPU 2. If the system crashes, the low priority systems may be lost permanently 3. Interrupt handling 4. cannot determine
118. (a) O(nlogn)	What is the best case complexity of QuickSort?	1. O(nlogn) 2. O(logn) 3. O(n) 4. O(n2)
119. (a) greater	The larger the block size, the _____ the internal fragmentation	1. a. Greater 2. a. Lesser 3. a. Same 4. none of the mentioned
120. (c)	Which of the following is not a declaration of the dictionary?	1. {1: 'A', 2: 'B'} 2.

		dict([[1,"A"],[2,"B"]])
		3. {1,"A",2"B"}
		4. {}
121. (d) a[2]=45	If a={5,6,7,8}, which of the following statements is false?	1. print(len(a))
		2. print(min(a))
		3. a.remove(5)
		4. a[2]=45
122. (b) a={5,6,7}	If a={5,6,7}, what happens when a.add(5) is executed?	1. a={5,5,6,7}
		2. a={5,6,7}
		3. Error as there is no add function for set data type
		4. Error as 5 already exists in the set
123. (c)	Suppose d = {"john":40, "peter":45}, what happens when we try to retrieve a value using the expression d["susan"]?	1. Since "susan" is not a value in the set, Python raises a KeyError exception
		2. It is executed fine and no exception is raised, and it returns None

		3. Since "susan" is not a key in the set, Python raises a KeyError exception 4. Since "susan" is not a key in the set, Python raises a syntax error
124. (c) del d["john"]	Suppose d = {"john":40, "peter":45}, to delete the entry for "john" what command do we use	1. d.delete("john":40) 2. d.delete("john") 3. del d["john"] 4. del d("john":40)
125. (b) len(d)	Suppose d = {"john":40, "peter":45}. To obtain the number of entries in dictionary which command do we use?	1. d.size() 2. len(d) 3. size(d) 4. d.len()
126. (a)	Which of the following is not the correct syntax for creating a set?	1. set([[1,2],[3,4]]) 2. set([1,2,2,3,4]) 3. set((1,2,3,4)) 4. {1,2,3,4}
127. (d)	Which of the following statements create a dictionary?	1. d = {} 2. d = {"john":40, "peter":45}

		3. d = {40:"john", 45:"peter"} 4. All
128. (b)	Which of the following statements is used to create an empty set?	1. { } 2. set() 3. [ ] 4. ( )
129. (b)	Which of these about a dictionary is false?	1. The values of a dictionary can be accessed using keys 2. The keys of a dictionary can be accessed using values 3. Dictionaries aren't ordered 4. Dictionaries are mutable
130. (d)	Which of these about a set is not true?	1. Mutable data type 2. Allows duplicate values 3. Data type with unordered values 4. Immutable data type
131. (c)	Which package is always imported by default?	1. java.awt.* 2. java.util.* 3. java.lang.* 4. java.io.*

132. (c) Inheritance	The following Syntax is used for?
	
	class Subclass-name extends Superclass-name
	{
	//methods and fields
	}
		1.
		Polymorphism
		2.
		Encapsulation
		3.
		Inheritance
		
		4.
		None of the above

133. (d) final	Which of these keywords can be used to prevent inheritance of a class?	1. super 2. constant 3. class 4. final
134. (d) java.lang.reflect	Which of these package is used for analyzing code during run-time?	1. java.applet 2. java.awt 3. java.io 4. java.lang.reflect

135. (c) class.java.lang .Object	What is the output of this program?
	
	class Output
	
	{
	
	public static void main(String args[])
	
	{
	
	Object obj = new Object();
	
	System.out.print(obj.getclass());
	
	}
	
	}
		1.
		Object
		2.
		class Object
		
		3.
		class java.lang.Object
		4.
		Compilation Error

136. (c) Compiler Error	class Base {
	
	public void foo() { System.out.println("Base"); }
	
	}
		1.
		Base
		2.
		Derived
		3.
		Compiler Error

	class Derived extends Base {
	
	 private void foo() { System.out.println("Derived"); }
	
	 }
	
	 public class Main {
	
	 public static void main(String args[])
	
	 {
	
	 Base b = new Derived();
	
	 b.foo();
	
	 }
	
	 }
		4.
		 Runtime Error

137. (c) Smaller instances of the same	Recursion is a method in which the solution of a problem depends on _____	1. Larger instances of different problems 2. Larger instances of the same problem 3. Smaller instances of the same problem 4. Smaller instances of different problems
138. (b) stdlib.h	Which header file should be included to use functions like malloc() and calloc()?	1. memory.h 2. stdlib.h 3. string.h 4. dos.h
139. (a) Relative	_____ addressing mode is most suitable to change the normal sequence of execution of instructions.	1.Relative 2.Indirect 3.Index with Offset 4. Immediate
140. (a) Constraints	_____ is preferred method for enforcing data integrity	1.Constraints 2.Stored Procedure 3.Triggers4.Cursors

141. (a) Cartesian Product	_____ produces the relation that has attributes of R1 and R2	1.Cartesian product 2.Difference3.Intersection 4.Union
142. (a) ^,$	_____ matches the start of the string and _____ matches the end of the string in a regular expression.	1.'^', '$' 2.'$', '^' 3.'$', '?' 4.'?', '^'
143. (b) Parallelism	_____ leads to concurrency.	1.Serialization 2.Parallelism 3.Serial processing 4.Distribution
144. (a) None	_____ data type means non existent, not known or empty.	1. none 2. int 3. float 4. string
145. (b) Identifier	_____ is a sequence of one or more characters used to name a given program element.	1. Operator 2. Identifier 3. Symbol 4. Expression
146. (c) Variable	_____ is the name that is associated with a value.	1. Operator 2. Symbol 3. Variable 4. Expression
147. (a) Continue	_____ will jump to the beginning of the loop and starts execution.	1. continue 2. pass 3. exit 4. break
148. (b) if	_____ will repeatedly executes a set of statements based on a provided boolean expression.	1. for 2. if 3. while

		4. elif
149. (d) break	_____ will terminate the loop and starts execution after the very next statement of the loop.	1. continue 2. pass 3. exit 4. break
150. (b) pass	_____ will does nothing at all: it's an empty statement placeholder.	1. continue 2. pass 3. exit 4. break
151. (c) Selection structure	_____ control the flow of statement execution based on some condition.	1. Iterational structure 2. Sequential structure 3. Selection structure 4. Functional structure
152. (b)	A 3 NF relation is split into 4 NF	1. By removing overlapping composite keys 2. By splitting into relations which do not have more than one independent multivalued dependency 3. Removing multivalued dependency 4. By putting dependent non-key attribute in a separate table
153. (a)	A _____ is developed using historical cost information that relates some software metric to the project cost.	1.Algorithmic cost modelling 2.Expert judgement 3.Estimation by analogy4.Parkinson's Law
154. (d)	A _____ is an identifier that has pre-defined meaning in a programming language.	1. Variable 2. Symbol 3. Operator

	4. Keyword	
155. (a) complete binary tree	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	1.complete binary tree 2.heap or nearly complete binary tree 3.AVL tree 4.threaded tree
156. (d) 19	A binary tree T has 20 leaves. The number of nodes in T having two children is	1.34 2.99 3.7 4.19
157. ------	A cache memory unit with a capacity of N words and block size of B words is to be designed. If it is designed as direct mapped cache, the length of the TAG field is 10 bits. If the cache unit is now designed as a 16-way set-associative cache, the length of the TAG field is _____ bits.	1. 12 2.14 3.16 4.18
158. ------	A cache that supports dirty bits to manage the most recently written value to a given memory location in the memory hierarchy is referred to as a:	1.write-back cache 2.write-through cache3.set-associative cache 4.fully-associative cache
159. ------	A certain quadratic-time algorithm uses 500 elementary operations to process an input of size 10. What is the most likely number of elementary operations it will use if given an input of size 1000?	1.500 2.50000 3.100000 4.5000000
160. ------	A class template can declare	1. static data members 2. global data members 3. constant data members 4. private data members
161. (a) 8 bits	A computer system has 256 instructions. What would be the width of the opcode field	1. 8 bits 2. 10 bits 3. 7 bits 4.9 bits
162. (d) Arithmetic Overflow	A condition that occurs when a calculated result is too large in magnitude to be represented as _____.	1. Garbage value 2. Error 3. Arithmetic underflow 4. Arithmetic overflow
163. should be 0	A condition that occurs when a calculated result is too small in magnitude to be represented as _____.	1. Garbage value 2. Error 3. Arithmetic underflow

		4. Arithmetic overflow
164. (c) function	A constructor is a special type of	1. class 2. field 3. function 4. property
165. (a) an object is declared	A constructor is called whenever	1.an object is declared 2.an object is used3.a class is used 4.a class is declared
166. (b) 8	A counting semaphore was initialized to 10. Then 6 P (wait) operations and 4V (signal) operations were completed on this semaphore. The resulting value of the semaphore is	1.0 2.8 3.10 4.12
167. (a)	A CPU generally handles an interrupt by executing an interrupt service routine	1.By checking the interrupt register after finishing the execution of the current instruction. 2.By checking interrupt register at the end of the fetch cycle 3.As soon as an interrupt is raised 4.By checking interrupt register at regular time interval
168. (c) 15 bits	A CPU generates 32-bit virtual addresses. The page size is 4 KB. The processor has a translation look-aside buffer (TLB) which can hold a total of 128 page table entries and is 4-way set associative. The minimum size of the TLB tag is:	1.11 bits 2.13 bits 3.15 bits 4.20 bits
169. (b)	A critical section is a program segment	1. which should run in a certain specified amount of time 2.which avoids deadlocks3.where shared resources are accessed4.which must be enclosed by a pair of semaphore operations, P and V
170. (b)	A critical section is a program segment	1.which is having a higher priority. 2.where shared resources are accessed 3.which forces deadlocks 4.where code is shared by programs
171. (d)	A data movement instruction will	1.Modify the status register. 2.Modify the stack pointer 3. Modify the stack pointer4.Transfer data from one location to another
172. (b)	A deadlock-free solution to the dining philosophers problem :	1.necessarily eliminates the possibility of starvation 2.does not

		necessarily eliminate the possibility of starvation 3.eliminates any possibility of any kind of problem further4.none of the mentioned
173. (d)	A design is said to be a good design if the components are	1.Strongly coupled 2.Weakly cohesive3.Strongly coupled and strongly cohesive4.Strongly cohesive and weakly coupled.
174. (b) Data Flow	A directed arc or line in DFD represents	1.Process 2.Data flow 3.Data Store4.External Entity
175. (a) Destructor	A function that is called automatically each time an object is destroyed is a	1.destructor 2.terminator 3.destroyer4.constructor
176. (b) Class	A generalized description of a collection of similar objects is a	1.Object 2.Class 3.Component 4.Database
177. (a) Nibble	A group of 4 binary bits is called:	1.Nibble 2.Byte 3.Decimal 4.Digit
178. (b) 7	A LRU page replacement is used with four page frames and eight pages. How many page faults will occur with the reference string 0172327103 if the four frames are initially empty?	1.6 2.7 3.5 4.8
179. (b) Cache	A memory buffer used to accommodate a speed differential is called	1.stack pointer 2.cache 3.accumulator 4.disk buffer
180. (d) All	A method used for pairwise alignment is	1.Dot plot 2.Global Alignment 3.Local Alignment 4.All the above
181. (a) Burst Transfer	A mode of transfer which is needed for fast devices such as magnetic disks where data transmission cant be stopped or slow down until an entire block is transferred is called …………….. transfer.	1.burst transfer 2.fracture transfer3.disintegrate transfer 4.crumble transfer
182. (d) All	A monitor is a module that encapsulates	1.shared data structures 2.procedures that operate on shared data structure3.synchronization between concurrent procedure invocation 4.all of the mentioned
183. (a) Polymorphism	A pointer to a base class type can be referred to an object of a derived class type, this is called.	1.polymorphism 2.inheritance 3.memory addressing 4.encapsulation
184. (b) 4	A process executes the code fork(); fork(); fork(); The total number of child processes created is	1.3 2.4 3.7 4.8
185. (c) ready,short-term	A process is selected from the _____ queue by the _____ scheduler, to be executed.	1.blocked, short-term 2.wait, long-term 3. ready, short-term 4.ready, long-term

186. (a) .h extension	A programmer can create custom header files that must be end with	1..h extension 2..l extension 3..ios extension4..a extension
187. (c) Deadlock prevention	A protocol that ensures system will never enter a deadlock state is called	1.Deadlock detection 2.Deadlock elimination3.Deadlock prevention 4.Deadlock recovery
188. (a) Partial dependencies	A relation R is said to be in 2NF when it does not have	1.Partial Dependencies 2.Transitive Dependencies 3.Multivalued Attributes 4.Both Partial dependencies and Multivalued attributes
189. (c) a tuple	A relational database developer refers to a record as	1.a criteria 2.a relation 3.a tuple 4.an attribute
190. (b)Serial schedule	A schedule where the operations of each transaction are executed consecutively without any other interference from other transactions is called	1.Non-serial schedule 2.Serial schedule3.Recoverable schedule 4.Concurrent schedule
191. (b) the lost update problem	A second transaction writes a second value of a data-item (datum) on top of a first value written by a first concurrent transaction, and the first value is lost to other transactions running concurrently which need, by their precedence, to read the first value. The transactions that have read the wrong value end with incorrect results. This corresponds to	1.The Dirty Read problem 2.The lost update problem 3.Inconsistent Retrieval problem4.The incorrect summary problem
192. (d) domain	A set of possible data values is called	1.attribute 2.degree 3.tuple 4.domain
193. (d) risk analysis	A simple way of looking at the spiral software life-cycle model is as a waterfall model with each phase proceeded by	1.A simple way of looking at the spiral software life-cycle model is as a waterfall model with each phase proceeded by2.Freezing 3.Synchronization 4.Risk analysis
194. (c) thread	A single sequential flow of control within a program is _____	1.Process 2.Task 3.Thread 4.Structure
195. -------	A single State Chart diagram in UML is used for modeling the transition of states of _____ object/objects across _____ scenario/scenarios	1.a single, multiple 2.a single, a single3.multiple ,single 4.multiple, multiple
196. -------	A six person month project with two resources can be completed in	1.12 months 2.3 months 3.6 months 4.1 months
197. (a)	A solution to the Dining Philosophers Problem which avoids deadlock is	1.ensure that one particular philosopher picks up the left fork before the right fork, and that all other philosophers pick up the right fork before the left fork 2.ensure that all philosophers pick up the

		right fork before the left fork 3.ensure that all philosophers pick up the left fork before the right fork 4. None of the above
198. (a) 196	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 then accesses the same 100 pages but now in the reverse order. How many page faults will occur?	1.196 2.192 3.197 4.195
199. (d)	A table is in 2NF if the table is in 1NF and what other condition is met?	1. There are no functional dependencies 2. There are no null values in primary key fields 3. There are no repeating groups 4. here are no attributes that are not functionally dependent on the relation's primary key
200. (d)	A term for simultaneous access to a resource, physical or logical.	1.Multiprogramming 2.Multitasking 3.Threads4.Concurrency
201. (b) no. of resources	A thread is a lightweight process. In the above statement, weight refers to	1.Time 2.number of resources 3.speed 4.All the above
202. (a) aborted	A transaction may not always complete its execution successfully. Such a transaction is termed _____	1.Aborted 2.Terminated 3.Closed 4.Partially committed
203. (c) strict 2 phase locking protocol	A two-phase locking protocol variant that requires that all locks be held until transaction commit is called	1.Lock-point two-phase locking protocol2.Deadlock two-phase locking protocol3.Strict two-phase locking protocol4.Rigorous two-phase locking protocol
204. (b) a pendant vertex	A vertex of degree one in a graph is called	1.an isolated vertex 2.a pendent vertex 3.a colored vertex 4.a null vertex
205. (d) confirmation dialog box	A …………………… mostly used to take users a choice on any option and displays a dialog box with two buttons Ok and Cancel.	1.Alert dialog box 2.Information dialog box3.Prompt dialog box 4.Confirmation dialog box
206. (c) poor quality control	According to a statistical report: "over 30% of all software projects are cancelled before completion and over 70% of the remainder fail to deliver expected features". What must be the reason for such a situation ?	1.Good change management 2.Excellent requirements management 3.Poor quality control 4.Meeting the end-users expectation

207. (d) constriction in the dividing cells	Actin filament is not involved in the formation of	1.lamellipodia 2.microvilli 3.spindle fibres4.constriction in the dividing cells
208. (a) behavioral model	Activity diagrams is a	1.Behavioral model 2.Context model 3.Data model 4.Process model
209. (d) instruction count	Addressing modes being used in the execution of programs, have a purpose of significantly reduce	1.Hit miss 2. Hit rate 3.Clock cycle4.Instruction count
210. (a) part_of relationship	Aggregation represents	1.is_a relationship 2.composed_of relationship 3.part_of relationship 4.uses_a relationship
211. (a) and (c)	Algorithmic cost estimation in different organisations may be different for the same application development, because	1.Different organisations consider complexity factors at the same level 2.Different organisations may use same programming languages project developing 3.Developers' skills may vary 4.It did not depends on the techniques for measuring the productivity
212. (d) All	Aligning two sequences by searching similar pattern is called	1.a. Pair wise alignment 2.b. Sequence alignment 3.c. Multiple sequence alignment 4. d. All the above
213. (b) global alignment	Alignment method used for aligning closely related sequences is	1.Pairwise alignment 2.global alignment3.local alignment 4.MSA
214. (a) global alignment	Alignment of entire sequence is known as	1.a. Global alignment 2. b. Local alignment 3.c. Pair wise alignment 4. d. Multiple sequence alignment
215. (c) Rasmol	All are sequence alignment tools except	1.BLAST 2.FASTA 3.RASMOL 4.CLUSTAL W
216. ------	All the public members of a base class become protected member of the derived class. This happens in	1.protected inheritance 2.public inheritance3.private inheritance 4.virtual inheritance
217. (a) anomers	Alpha and beta D-glucose are said to be	1.anomers 2.epimers 3.optical isomers4.stereoisomers
218. (a) i and ii	An attribute y may be functionally dependent on (i) a composite attribute x, y (ii) a single attribute x (iii) no attribute	1. i and ii 2. i and iii

		3. ii and iii 4. iii
219. (a) memory interleaving	An effective method to introduce parallelism in memory access is by _____	1.Memory interleaving 2.TLB 3.Pages4.Frames
220. (c) interrupt	An exception condition in a computer system caused by an event external to the CPU is known as -----------	1.Halt 2. Process 3.Interrupt 4.Trap
221. (b) A is not a candidate key	An instance of relational schema R (A, B, C) has distinct values of A including NULL values. Which one of the following is true?	1. A is a candidate key 2. A is not a candidate key 3. A is a primary Key 4. Both (A) and (C)
222. (c) logical	An instruction used to set the carry flag in a computer can be classified as	1.Data transfer 2.Process control 3.Logical4.Arithmetic
223. (d) receive and send messages	An IPC facility provides at least two operations :	1. write & delete message 2. delete & receive message 3. send & delete message 4. receive & send message
224. (a) 0	An n * n array v is defined as follows: v[i,j]=i-j for all i, j, 1<=i<=n, 1<=j<=n The sum of the elements of the array v is	1. 0 2. n-1 3. n2-3n+2 4. n2(n+1)/2
225. (c) clustered computer	Another type of multiple-CPU system is the	1.mini Computer 2.Super Computer3.Clustered System 4.Systematic system
226. ------	Arrange the 32-bit number 0x0A0B0C0D in big endian order starting from address 1000h	1.1000h-0D, 1001h-0C, 1002h-0B, 1003 – 0A2.1000h-0A, 1001h-0B, 1002h-0C,1003- 0D 3.1000h0B,1001h-0A,1002h-0D,1003h-0C4.1000h – 0C, 1001h-0B, 1002h-0D, 1003h-0A
227. (b)	Arrange the following steps to form a basic/general Engineering Process Model. 1. Test 2. Design 3.Install	1.2, 4, 5, 1, 6, 3 2.4, 2, 5, 1, 3, 6 3.2, 4, 5, 1, 3, 6 4.4, 2, 5, 1, 6, 3

4,2,5,1,3,6	4.Specification 5. Manufacture 6. Maintain	
228. (a) 80%	As a rule of thumb what percentage of the CPU bursts should be shorter than the time quantum?	1.80% 2.70% 3.60% 4.50%
229. (d) aspartic acid	Asparagine is the amide of	1. a) glutamic acid 2. b) serine 3. c) glycine 4. d) aspartic acid
230. (c) feasibility study	Assessment of the practicality of the proposed system is called	1.Requirements Gathering 2.Project Scheduling 3.Feasibility Study 4.Review
231. (d) content addressable memory	Associative memory is also known as	1.Virtual memory 2.Cache memory 3.Main memory 4.Content addressable memory
232. (a)	Balancing a Data Flow Diagram means	1.Conserving inputs to and outputs from a process at the next level of decomposition2.Conserving Process Bubbles in various levels of decomposition 3.Removing Datastores for a process during decomposition 4.Adding Additional Datastores at the next level of decomposition
233. (a) automatic buffering	Bounded capacity and Unbounded capacity queues are referred to as :	1.programmed buffering 2.automatic buffering 3.user defined buffering 4.no buffering
234. (a) Animal Fat	Butter is an example of	1.animal fat 2.plant oil 3.plant polysaccharide4.plant protein
235. (b) nlogn	By the master theorem, the solution to the recurrence $T(n)=2T(n/2)+n$, when expressed in big-theta notation, is	1.n 2.n log n 3.n^2 4.n^3
236. (c) n^2	By the master theorem, the solution to the recurrence $T(n)=9T(n/3)+n$, when expressed in big-theta notation, is	1.n 2.n log n 3.n^2 4.n^3
237. (c) galactose	C-4 epimer of glucose is	1.mannose 2.fructose 3.galactose 4.allose
238. (b) 3	Calculate Hamming distance between AGCCAAT and AGCAAT.	1.2 2.3 3.4 4.none of the above
239. (d) none	Calculate Hamming distance between the words BIOINFORMATICS and CONFORMATION.	1.2 2.3 3.4 4.NONE OF THE ABOVE
240. should be 6	Calculate the hamming distance for the following strings: String 1 = a t g c t g t a String 2 = a g g t g t a	1.1 2.2 3.4 4.0

241. (a) 1	Calculate the person months for a project that was completed in two months with two people working on it.	1.1 2.4 3.2 4.8
242. (a) yes	Can a Structure contain pointer to itself?	1. Yes 2. No 3. Compilation Error 4. Runtime Error
243. (b) No	Can we initialize structure's elements in structure itself?	1. Yes 2. No 3. Depends on Compiler 4. Not Dependent on Compiler
244. (a)	CASE Tool stands for	1.Computer Aided Software Engineering2.Component Aided Software Engineering 3.Constructive Aided Software Engineering4.Computer Analysis Software Engineering
245. (a) phosphoprotein	Casein is a	1.phosphoprotein 2.glycoprotein 3.lipoprotein4.sulphoprotein
246. -----	Cellilose can not be digested by humans because of the absence of	1.alpha glucosidase 2.beta glucosidase3.protease 4.amylase
247. (b) Beta-d- glucose	cellulose is made up of	1.alpha -D- glucose 2.beta-D-glucose3.alpha -D- fructose 4.beta-D- fructose
248. -----	Cellulose is not soluble in water because	1.all the hydroxy groups are involved in intra and inter hydrogen bonding 2.all the hydroxy groups are free 3.the linkage is glycosidic 4.it is made up of glucose
249. (a) 1 sugar unit	Cerebroside contains	1.only one sugar unit 2.two sugar units3.many sugar units 4.no sugar units
250. (a)	Choose the correct statement from the following?	1.In a class, the access control is private by default. 2.In a struct, the access control is private by default. 3.In a class, the access control is static by default. 4.In a class, the

		access control is public by default.
251. (a)	Choose the function whose output will be: <_sre.SRE_Match object; span=(4, 8), match='aaaa'>.	1.re.search('aaa', "alohaaa", 0)2.re.match('aaa', "alohaaa", 0)3.re.match('aaaa', "alohaaaa", 0)4.re.search('aaaa', "alohaaaa", 0)
252. (b) Static Memory	Circuits that can hold their state as long as power is applied is _____.	1.Dynamic memory 2.Static memory3.Register 4.Cache
253. (c) both a and b	Coagulation is a --------------------- process.	1.reversible 2.irreversible 3.both a and b4.none of the above
254. (b) data consistency	Commit and rollback are related to ……….	1.data integrity 2.data consistency 3.data sharing 4.data security
255. -----	Consider a complete graph on vertex set {a,b,c,d}. Which of the following is the edge set of a breadth-first search tree formed from vertex a?	1.ab, ac, ad, bc, bd, cd 2.ab, bc, cd 3.ab, ac, ad 4.ab, bc, cd, da
256. -----	Consider a complete graph on vertex set {a,b,c,d}. Which of the following is the edge set of a depth-first search tree formed from vertex a?	1.ab, ac, ad, bc, bd, cd 2.ab, bc, cd 3.ab, ac, ad 4.ab, bc, cd, da
257. (a) 75 modulo 64	Consider a direct-mapped cache with 64 blocks and a block size of 16 bytes. To what block number does byte address 1200 map?	1.75 modulo 64 2.75 modulo 60 3.70 modulo 64 4.72 modulo 64
258. (b) SJF	Consider a set of n tasks with known runtimes r1, r2, … rn to be run on a uniprocessor machine. Which of the following processor scheduling algorithms will result in the maximum throughput?	1.Round-Robin 2.Shortest-Job-First3.Highest-Response-Ratio-Next 4.First-Come-First-Served
259. (d) 13	Consider a system having m resources of the same type. These resources are shared by 3 processes A, B and C which have peak demands of 3, 4 and 6 respectively. For what value of m deadlock will not occur ?	1.7 2.9 3.10 4.13
260. (b) 4	Consider a system with byte-addressable memory, 32-bit logical addresses, 4 kilobyte page size and page table entries of 4 bytes each. The size of the page table in the system in megabytes is _____.	1.2 2.4 3.6 4.8
261. 0.05	Consider a two-level cache hierarchy L1 and L2 caches. An application incurs 1.4 memory accesses per instruction on average. For this application, the miss rate of L1 cache 0.1, the L2 cache experience on average. 7 misses per 1000 instructions. The miss rate of L2 expressed correct to two decimal places is _____.	1. 0.05 2.0.06 3.0.074.0.08
262. (b)	Consider Peterson's algorithm for mutual exclusion between two concurrent processes i and j. The	1.flag [j] = true and turn = i 2.flag [j] = true and turn = j 3.flag [i] = true and

	program executed by process is shown below. repeat flag [i] = true; turn = j; while (P) do no-op; Enter critical section, perform actions, then exit critical section flag [i] = false; Perform other non-critical section actions. until false; For the program to guarantee mutual exclusion, the predicate P in the while loop should be	turn = j 4.flag [i] = true and turn = i

263. (a)2016	Consider the following C program.
	
	``c
	#include<stdio.h>
	void mystery(int *ptra, int *ptrb)
	{
	    int *temp;
	    temp = ptrb;
	    ptrb = ptra;
	    ptra = temp;
	}
	int main()
	{
	    int a=2016, b=0, c=4, d=42;
	    mystery(&a, &b);
	    if (a < c)
	        mystery(&c, &a);
	    mystery(&a, &d);
	    printf("%d\n", a);
	}
	``
	
	The output of the program _____
		1.
		2016
		2.
		0
		3.
		4
		4.
		8

264. -----	Consider the following code snippet: temp=root->left; while(temp->right!=NULL) temp=temp->right; endwhile return temp; The above code snippet for a BST with the address of the root node in pointer 'root' returns	1.Inorder successor of the root 2.Maximum element in the right subtree of root3.Minimum element in the right subtree of root 4.Inorder predecessor of the root

265. (d) assign 5 to a	Consider the following declaration:
	
	int a, *b=&a, **c=&b;
	
	The following program fragment
	
	a=4;
	
	**c=5;
		1.
		does not change the value of a
		2.
		assigns address of c to a
		3.
		assigns the value of b to a
		4.
		assigns 5 to a

266. ------	Consider the following five functions: (a) 4n, (b) log n, (c) log log n, (d) 17, (e) n^2 Which of the following is the correct order if the functions are listed in increasing order of asymptotic growth rate?	1.c b e a d 2.d c b a e3.b c d a e 4.b a c d e
267. -----	Consider the following recursive function def f(n): if n<0: return -1 * f (-1 * n) elif n==0: return 0 else: return 4 + f (n-1) What would be the output of f(8)?	1.12 2.4 3.32 4.2

268. (b) consistency	Consider the following transaction involving two bank accounts x and y. read(x); x := x – 50; write(x); read(y); y := y + 50; write(y) The constraint that the sum of the accounts x and y should remain constant is that of	1.Atomicity2.Consistency 3. Isolation 4.Durability
269. -----	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?	1.2NF 2.3NF 3.BCNF4.4NF
270. -----	Consider the snippet of code shown below and predict the output. X="SCOPE-VIT" print("%56s",X)	1.56 blank spaces before SCOPE-VIT2.56 blank spaces before SCOPE and VIT 3.56 blank spaces after SCOPE-VIT4.none of these
271. (b) 2	Consider three CPU-intensive processes, which require 10, 20 and 30 time units and arrive at times 0, 2 and 6, respectively. How many context switches are needed if the operating system implements a shortest remaining time first scheduling algorithm? Do not count the context switches at time zero and at the end.	1. 1 2. 2 3. 3 4. 4
272. (b) void display() const	Constant function in C++ can be declared as	1.void display() 2.void display() const 3.const void display() 4.void const display()
273. -----	CourseScheduler uses the Course object as a parameter in one of its methods to schedule courses.Identify the relationship between the classes course and course scheduler	1.Dependency 2.Aggregation 3.Generalization4.Composition
274. (a) enantiomers	D and L form of fructose are said to be	1.enantiomers 2.diasteromers 3.optical isomers 4.tautomers
275. (b) 2	DAG contains one molecule of glycerol with ---------- number of fatty acids	1.1 2.2 3.3 4.4
276. (d)	Data independence means	1.data is defined separately and not included in programs 2.programs are not dependent on the physical attributes of data 3.programs are not dependent on the logical attributes of data4.programs are not dependent on both physical and logical attributes of data
277. -----	Data transfer rate for Random access Memory is	1.TN=TA+N/R 2.1/cycle time 3. Access time + minimum time between two consecutive access operation 4.access time + cycle time
278. (d) int	Default return type of functions in CPP is _____ .	1.void 2.long 3.char 4.Int

279. (c) cohesive, coupled	Designers should aim to produce strongly _____ and weakly _____ designs	1.coupled,functional 2.maintainable,cohesive3.cohesive,coupled 4.coupled,cohesive
280. (a) SmartBlast	Designing of primers specific to PCR template is carried out by…………..	1.SmartBLAST 2.b. VecScreen 3. c. GEO 4. d. None of the above
281. (b) Repeats	Diagonals in dot plot depict	1.Palindromes 2.Repeats 3.Variable regions 4.None of the above
282. -----	Distinguish between arithmetic and logical shift	1.In logical shift, 0 is shifted and in arithmetic shift, the sign is preserved 2.In logical shift, 0 is shifted and in arithmetic shift, the sign is not preserved 3.In arithmetic shift, 0 is shifted and in logical shift, the sign is preserved 4.In arithmetic shift, 0 is shifted and in logical shift, the sign is not preserved
283. (a,b,c)	Dividing a program into functions	1. is the key to object-oriented programming. 2. makes the program easier to conceptualize. 3. makes the program run faster 4. may reduce the size of the program.
284. (b) Extracellular	Enzymes which are active outside the cell are called as	1. a) Intracellular enzymes 2.b) Extracellular enzymes 3.c) Intercellular enzymes 4.d) None
285. (b) Data integrity constraints	Establishing limits on allowable property values, and specifying a set of acceptable, predefined options that can be assigned to a property are examples of:	1. Attributes 2. Data integrity constraints 3. Method constraints 4. Referential integrity constraints
286. (a) A->B	Every time attribute A appears, it is matched with the same value of attribute B, but not the same value of attribute C. Therefore, it is true that:	1. A->B 2. A->C 3. A->(B,C) 4. (B,C)-> A
287. (b) 7.9	Examine the following:	1.

	double[][] values =
	
	  { {1.2, 9.0, 3.2},
	
	    {9.2, 0.5, 1.5, -1.2},
	
	    {7.3, 7.9, 4.8} } ;
	
	what is in values[2][1] ?
		7.3
		2.
		7.9
		3.
		9.2
		4.
		There is no such array element

288. (d) No such array element	Examine the following:
	
	double[][] values =
	
	  { {1.2, 9.0, 3.2},
	
	    {9.2, 0.5, 1.5, -1.2},
	
	    {7.3, 7.9, 4.8} } ;
	
	what is in values[3][0] ?
		1.
		7.3
		2.
		7.9
		3.
		9.2
		4.
		There is no such array element

289. (b) Cache	Example for Associative type of memory	1. Main Memory 2.Cache Memory 3. Magnetic 4.Optical
290. b or c	False sharing refers to the situation	1. update of the cache-line is done by one processor. 2.in which different processors update different parts of the same cache-line. 3. update of one part of the cache-line is done by several processors in false sharing mode. 4.in which different processors update the same part of different caches.
291. (b) Non-preemptive	FIFO scheduling is _____.	1.Preemptive Scheduling 2.Non-Preemptive Scheduling 3.Deadline Scheduling 4.Fair share scheduling
292. (a) Size of cache	Find the one that determines a high hit rate of the cache memory.	1.Size of the cache 2.Number of caches3.Size of the RAM 4.Cache access
293. (d)	Find the SQL statement below that is equal to the following: SELECT NAME FROM CUSTOMER WHERE STATE = 'VA';	1. SELECT NAME IN CUSTOMER WHERE STATE IN ('VA'); 2. SELECT NAME IN CUSTOMER WHERE STATE = 'VA'; 3. SELECT NAME IN CUSTOMER WHERE STATE = 'V'; 4. SELECT NAME FROM CUSTOMER WHERE STATE IN ('VA');

294. (b) derived attribute	Finding the current age of person is	1. Stored attribute 2. Derived attribute 3. Weak attribute 4. Strong attribute
295. (c) Real numbers	Floating point representation is used to store	1.Boolean values 2.Whole numbers 3.Real numbers 4. Integers
296. (b) 1,8,23	Floating-point numbers are typically packed into a computer datum as the sign bit, the exponent field, and the mantissa, from left to right. Specify the the fields IEEE double formats	1.1,5,10 2.1,8,23 3.1,11,52 4.1,5,112
297. -----	Fluidity of biomembrane is due to	1.saturated fatty acids 2.unsaturated fatty acids 3.cholesterol 4.glycoproteins
298. (d) public	For method to be an interface between the outside world and a class, it has to be declared	1.private 2.protected 3.external 4.public
299. -----	For the 8-bit word 00111001, the check bits stored with it would be 0111. Suppose when the word is read from memory, the check bits are calculated to be 1101. What is the data word that was read from memory?	1.10011001 2.00011001 3.00111000 4.11000110
300. (b) Super Key	For The relation R=(ABCDE),If A determines BCDE then A is	1. none 2. Super key 3. candidate key 4. Minimal SuperKey
301. -----	For which data structure does the search operation take O(log n) time in the worst case?	1.array 2.linked list 3.binary search tree4.AVL tree
302. (a) True	Foreign Key can be null	1.True 2.False 3.depends upon the scenario4.depends upon the database
303. (d)	Foreign Key is	1.A field in a table that matches a key field in another table 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

304. (b) 16x16	Four memory chips of 16 x 4 size have their address bases connected together. The system will be of the size	1.64 x 64 2. 16 x 16 3. 32 x 16 4.256 x 8
305. (a) Use Case	Functional requirements of a system is modelled using	1.Use-case Diagram 2.Class Diagram3.Sequence Diagram 4.Package Diagram
306. (c) aaa	Give the output of the following statement: print ('a' * 3)	1. 291 2. Error 3. 'aaa' 4. Garbage value
307. (a) 2+3j	Give the output of the following statement: print 2+1j * 3	1. (2+3j) 2. (6+3j) 3. Garbage value 4. Error
308. (c) True	Give the output of the following statement: print bool("text") _____.	1. False 2. '\0' 3. True 4. Garbage value
309. (a) Error	Give the output of the following statements: a, *b = 'spam';print a,b	1. Error 2. 's',['p','a','m'] 3. 's','p' 4. 's', 'pam'
310. (a) Error	Give the output of the following statements: a,b = range(1,4);print a,b	1. Error 2. 1,3 3. 1,2 4. 1,4
311. (d) 1,2,3	Give the output of the following statements: a,b,c =	1. Error

	range(1,4);print a,b,c	2. 1,3,4 3. 1,2,4 4. 1,2,3
312. (c) 2,1	Give the output of the following statements: a=1;b=2;a,b=b,a;print a,b	1. 1,2 2. Garbage value 3. 2,1 4. Error
313. (d) bdfhj	Give the output of the following statements: S = 'abcdefghijklmnop'; print S[1:10:2]	1. 'bdfhi' 2. 'bcfhi' 3. 'bcfgi' 4. 'bdfhj'
314. (b) acegikmo	Give the output of the following statements: S = 'abcdefghijklmnop'; print S[::2]	1. 'acdgikmo' 2. 'acegikmo' 3. 'acehikmo' 4. 'acegjkmo'
315. (d)olleH	Give the output of the following statements: S = 'Hello';print S[::-1]	1. 'Hello' 2. 'Heo' 3. 'He' 4. 'olleH'
316. (a) Hello	Give the output of the following statements: S = 'Hello';print S[::1]	1. Hello' 2. 'Heo' 3. 'He' 4. 'H'
317. (c) edc	Give the output of the following statements: S='abcde'; print S[-1:-4:-1]	1. 'abc'

		2. 'dcb' 3. 'edc' 4. Error
318. (b) bcd	Give the output of the following statements: S='abcde'; print S[1:-1:]	1. 'abc' 2. 'bcd' 3. 'edc' 4. Error
319. (a) 'spamBurger!'	Give the output of the following statements: S='spamSPAM!';print S = S[:4] + 'Burger' + S[-1]	1. 'spamBurger!' 2. 'spamBurger' 3. 'Burger!' 4. 'spam!'
320. (c) Inorder	Given a binary search tree, which traversal type would print the values in the nodes in sorted order?	1.preorder 2.postorder 3.inorder 4.breadth-first search
321. (b) there is only 1 value of y	Given an attribute x, another attribute y is dependent on it, if for a given x	1. there are many y values 2. there is only one value of y 3. there is one or more y values 4. there is none or one y value
322. (b) 1,2,3,4,5,6,7	Given an initially empty binary search tree, give an insertion order for 1,2,3,4,5,6,7 that minimizes height.	1.4,1,2,3,5,6,7 2.1,2,3,4,5,6,73.1,3,5,7,2,4,6 4.4,2,6,1,3,5,7
323. (b) 2E	Given an undirected graph G with V vertices and E edges, the sum of the degrees of all vertices is	1.E 2.2E 3.V 4.2V
324. wrong ques	Given memory partitions of 100 K, 200K, 300K, 500 K, and 600 K (in order) and processes of 212 K, 417 K, 112 K, and 426 K (in order), using the first-fit algorithm, in which partition would the process requiring 426 K be placed?	1.500 2.200 3.300 4.600
325. (c)	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 3.In a row of a relational table, an

		attribute can have more than one value 4.In a row of a relational table, an attribute can have exactly one value or a NULL value

326. (a)	Given the following:
	
	int[][] items =
	
	{ {0, 1, 3, 4},
	
	{4, 3, 99, 0, 7 },
	
	{3, 2} } ;
	
	Which of the following statements replaces the 99 with 77?
		1.
		items[1][2] = 77;
		2.
		items[2][1] = 77;
		3.
		items[99] = 77;
		4.
		items[2][3] = 77;

327. -----	Given the functional dependencies, {AB -> CDE and A -> E}, for relation schema R = (A,B,C,D,E) we can infer the following:	1.A is a key for R 2.BE is a key for R 3.AB is a key for R 4.none of the options
328. (c) uniporter	GLUT is an example of	1.symporter 2.antiporter 3.uniporter4.pump
329. (a) Triose	Glyceraldehyde is a	1.triose 2.tetrose 3.pentose 4.hexose
330. (c) Plant Cells	Glyoxysomes are found only in	1.animal cells 2.bacterial cells 3.plant cells4.algal cells
331. (a) Transport Protein	Hemoglobin is an example for	1.transport protein 2.contractile protein3.catalytic protein 4.defense protein
332. (a)	How can you add a comment in a JavaScript?	1.//This is a comment 2.<--This is a comment--> 3.'This is a comment' 4."This is a comment"
333. (b)	How can you change "Hansen" into "Nilsen" in the "LastName" column in the Persons table?	1. UPDATE Persons SET LastName='Hansen' INTO LastName='Nilsen' 2. UPDATE Persons SET LastName='Nilsen' WHERE LastName='Hansen' 3. MODIFY Persons SET LastName='Hansen' INTO LastName='Nilsen 4. MODIFY Persons SET LastName='Nilsen' WHERE LastName='Hansen'

334. (b)	How do we declare a JavaScript variable?	1.variable Name; 2.var Name; 3.v Name; 4.v Name
335. (c)	How do you change the background color with CSS?	1.color: #cccccc; 2.background-setup: #cccccc; 3.background-color: #cccccc; 4.page-color:#cccccc;
336. (a)	How do you create a function in JavaScript?	1.function myFunction() 2.function -myFunction() 3.function:myFunction()4.function:: myFunction()
337. (a)	How do you make a background image not to repeat itself?	1.background-repeat: repeat-x; 2.background-repeat: none; 3.background-repeat: no-repeat;4.background-repeat: repeat;
338. (a)	How do you use an image as a background?	1.background-image: url("hike.png");2.page_background: url("hike.png"); 3.mage: url("hike.png"); 4.page: url("hike.png");
339. (a)	How do you write your registration number in pop up box?	1.prompt 2.alert 3.confirm 4.confirmation
340. (b) Inheritance	How is generalization implemented in Object Oriented programming languages?	1.Polymorphism 2.Inheritance 3.Encapsulation4.Abstract Classes
341. (b) 16	How many 128 x 8 RAM chips are needed to provide a memory capacity of 2048 bytes?	1. 8 2.16 3.24 4. 32
342. ----	How many address bits are required to represent a 32K memory	1.10 bits 2.12 bits 3.16 bits 4.15 bits
343. (a) 10	How many base pairs are present in each turn of B-DNA?	1.10 2.11 3.12 4.13
344. (d) 10	How many edges are there in a complete graph on 5 vertices?	1.5 2.6 3.8 4.10
345. ----	How many edges are there in a connected, acyclic graph on 10 vertices?	1.8 2.9 3.10 4.11
346. (a) n-1	How many edges are there in a tree on n vertices?	1.n-1 2.n 3.n+1 4.n^2
347. (a) 64	How many memory chips of (128 x 8) are needed to provide a memory capacity of 4096 x 16?	1.64 2.32 3.128 4.16
348. (c) 4	How many peptide bonds are found in a pentapeptide?	1.5 2.6 3.4 4.0
349. (a) 1	How many possibilities of mapping does a direct mapped cache have?	1.1 2. 2 3. 3 4.4
350. (c) 2	How many times will A be printed ?	1. 0

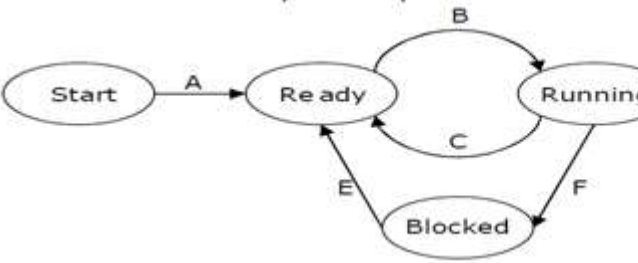|		

	``
	class A
	
	{
	
	public:
	
	  ~A(){
	
	  cout <<"A";
	
	  }
	
	};
	
	int main()
	
	{
	
	  A obj;
	
	  obj.~A();
	
	}
	``
		2.
		1
		3.
		2
		4.
		error

351. (d)	How many undirected graphs (not necessarily connected) can be constructed out of a given set V={v_1,v_2,...,v_n} of n vertices?	1.n(n-1)/2 2.2^n 3.n! 4.2^(n(n-1)/2)
352. (d)	How to get a single line border for all the elements in the table?	1.td,tr,th { border: 2px solid red; border-collapse:collapse} 2.li{ border: 2px solid red; border-collapse:none} 3.h1 { border: 2px solid red; border-collapse:collapse} 4.p { border: 2px solid red; border-collapse:none}
353. (a)	How will you select the heading "hello"? <div id="header"> <h1> Website.com </h1> </div> <div id="content"> <h1>Hello!</h> <p>bla bla</p> </div>	1.h1-content{ } 2.#content h1{} 3. .content-h1{ } 4.h1#content{ }
354. (a)	HTML stands for	1.Hypertext Markup Language 2.Hypertext Module Language 3.Hyperlink Markup Language 4.Hyperlink Module Language
355. (a)	HTML stands for	1.Hypertext 2.Link 3.fprm 4.anchor

356. (a) Aggregation	Identify the relationship in which the child class's instance life cycle is dependent on the parent class's instance life cycle.	1.Aggregation 2.Dependency 3.Composition4.Generalization
357. (c)	Identify, from among the following, the correct statement.	1.One of the main challenges Software Engineering facing today is the requirement of most software systems to work with a multitude of homogenous systems 2.'Legacy systems' are custom developed software systems for the legal domain 3.Software does not wear-out in the traditional sense of the term, but software does tend to deteriorate as it evolves 4.Since software is essentially 'intangible' it is relatively easy to manage software projects
358. (c)	If a binary tree has n nodes, which of the following best characterizes the maximum possible height of the tree?	1.n/2 2.sqrt(n) 3.n-1 4.n^2
359. (c) fully associative	If a block can be placed at anywhere in the cache, this cache is said to be	1.Indirectly mapped 2.Directly mapped 3.Fully associative 4.Partially associative
360. (d) n-1	If a complete binary tree has n nodes, then the depth of the tree is	1.O(1) 2.O(log n) 3.n^2 4.n - 1
361. (a) 2-phase locking	If a distributed transactions are well-formed and 2-phased locked, then ………….….. is the correct locking mechanism in the distributed transaction as well as in centralized databases.	1.two phase locking 2.three phase locking3.transaction locking 4.well-formed locking
362. (c) None	If a function doesn't have a return statement, which of the following does the function return?	1.integer 2.Null 3.None 4.Error
363. should be auto	If a member variable is declared as one of the below, all objects of that class have access to that variable	1. static 2. auto 3. extern 4. register
364. (b) 90%	If a memory access takes 20ns with cache and 110ns without it, then the hit ratio(cache uses a 10ns memory) is	1.93% 2. 90% 3. 88% 4.87%
365. (d)	If a piece of data is stored in two places in the database, then	1. storage space is wasted 2.

		changing the data in one spot will cause data inconsistency 3. in can be more easily accessed 4. both a and b
366. (a)	If attribute A determines both attributes B and C, then it is also true that:	1. A -> B 2. B -> A 3. C -> A 4. (B,C) -> A
367. (c)	If attributes A and B determine attribute C, then it is also true that:	1. A->C 2. B->C 3. (A,B) is a composite determinant 4. C is a determinant
368. (b) complete	If every node u in G adjacent to every other node v in G, then the graph G is said to be	1.isolated 2.complete 3.finite 4.strongly connected
369. ----	If no node having a copy of a cache block, this technique is known as	1.Uniform memory access 2.Cached 3.Un-cached 4.Commit
370. ----	If one attribute is determiant of second , which in turn is a determinant of third, then the relation cannot be	1. well strucuted 2. in 1 NF 3. in 2NF 4. in 3NF
371. (b) Extends	If placing order is an use case and placing phone order is another use case ,the relationship between these two use cases can be	1.Includes 2.Extends 3.Generalization4.Dependency
372. ----	If professor and department are classes in an university management system ,the relationship between professor and department can be modeled using	1.Aggregation 2.Composition 3.Generalization 4.Dependency
373. (c)	If there are four ROM ICs of 8K and two RAM ICs of 4K words, then the address range of Ist RAM is (Assume initial addresses correspond to ROMs)	1. (8000)H to (9FFF)H 2.(6000)H to (7FFF)H3.(8000)H to (8FFF)H 4.(9000)H to (9FFF)H
374. ----	If there are n relations how many number of join	1.N+1 2.N 3.N-1 4.A Number in the

	conditions has to be applied to retrieve the data from all the n relations?	range 0 toN.
375. (c) nlogn	If we use mergesort to sort an array with n elements, what is the worst case time required for the sort?	1.O(log n) 2.O(n) 3.O(n log n) 4.O(n^2)
376. ----	If Writing proposals for old customers and writing proposals for new customers are two use cases for a proposal writing system ,where in the proposals written for new customers should have additional information about the firm that applies for the project .what is the relationship between these two use cases	1.Includes 2.Extends 3.Association4.Dependency
377. ----	If x--> y then y --> x. This statement is	1.True 2.False 3.Some times true 4.depends on DBMS
378. ----	IF Y is a subset of X then	1.X --> Y 2.YX -->X 3.YX-->YX 4.none of the options
379. ----	If you have a container of 300px all around, which size will fit in the container?	1.p{ width:500px; height:500px; } 2.p{ width:301px; height:259px; } 3.p{ width:200px; height:500; } 4.p{ width:250px; height:200px; }
380. (a) o.m=m.f	If you have a function f and an object o, you can define a method named m of o with	1.o.m=m.f; 2.o.m=f; 3.o=f.m; 4.o=f;
381. (b)	If you want to select all the anchor tags from the following what selector will you use? I am special! Me too.	1.p.a { } 2.a{ } 3.ul a{ } 4.ul li a{ }
382. (c)	If you want to select the class info and not the id then, the selector to use is <h1>	1. .info { } 2.#info{ } 3.info{ } 4. <info>{ }
383. ----	In -----------------Mode, the content of the program counter is added to the address part of the instruction in order to obtain the effective address.	1.Relative Addressing Mode 2.Indexed Addressing Mode 3.Base Register Addressing Mode 4.Register Direct Mode
384. ----	In 2's complement representation, a certain negative number -N is 1011. The representation of +N is	1.0100 2.0101 3.0110 4.1111
385. ----	In a conceptual model for a university, which of the following could most appropriately be represented as a weak entity?	1. Student 2. Course 3. Grade 4. Faculty
386. (b) Course pre-	In a conceptual model for a university, which of the following could most appropriately be represented	1.Student credit hours 2.Course prerequisites 3.Parking sticker assignments4.Final exam schedules

requisite	via a recursive relationship?	
387. (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 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 compete sub graph of a graph) 4.A graph with bridges cannot have a cycle
388. (b)	In a program, If there exists a function template with two parameters and normal function say void add(int , int), so add(3,4) will __	1.Invoke function template body as it is generic one 2.Invokes normal function as it exactly matches with its prototype 3.Not be called and Compiler issues warning 4.Not be called and Compiler issues ambiguity in calling add()
389. (b)	In a program, If there exists a function template with two parameters and normal function say void add(int , int), so add(3,4) will _____ .	1.Invoke function template body as it is generic one 2.Invokes normal function as it exactly matches with its prototype 3. Not be called and Compiler issues warning 4.Not be called and Compiler issues ambiguity in calling add()
390. (b) no. of attributes	In a relational model, degree is termed as	1.number of tables 2.number of attributes3.number of rows 4.number of candidate keys of the table
391. (a) Ready	In a time-sharing operating system, when the time slot given to a process is completed, the process goes from the RUNNING state to the	1.READY state 2.BLOCKED state3.TERMINATED state 4.SUSPENDED state
392. (b) growing phase	In a two-phase locking protocol, a transaction release locks in ……… phase.	1.shrinking phase 2.growing phase 3.running phase 4.initial phase
393. ----	In a vectored Interrupt the address of interrupt service routine is given	1. by the interrupting source 2. in a Fixed memory location 3.by an instruction executing in CPU 4. by the value of program counter
394. (a) total participation	In an E-R diagram double lines indicate	1.Total participation 2.Multiple participation3.Cardinality N 4.None of the above
395. (c) base address of an array	In C, if you pass an array as an argument to a function, what actually gets passed?	1.Value of elements in array 2.First element of the array 3.Base address of the array4.Address of the last element of array
396. (c) Replication	In coherent multiprocessor, caches that are present provides both migration and	1.Coherence 2.Recurrence 3.Replication4.Uniformity
397. (a) p{}	In CSS, how would you select all the paragraph tags on a page?	1.p { } 2.#p{ } 3.para{ } 4..p{ }

398. (a)	In CSS, how would you select only the paragraphs with class name "warning"? <p class="warning">Don't do it.</p> <pDo it.</p> <p class="warning">Nooo, don't do it.</p>	1. .warning { } 2.#warning{ } 3.p{ } 4.<warning>{ }
399. (b) mainpic{}	In CSS, how would you select this image by its id? <img id="mainpic" src="cat.png">	1..mainpic { } 2.#mainpic{ } 3.img{ } 4.cat{ }
400. (a) Circle	In DFDs, a process is represented as a	1.Circle 2.Arrow 3.Square 4.Parellelogram
401. (c)	In double precision format the size of the mantissa is - ------------	1.32 bit 2.52 bit 3.64 bit 4.72 bit
402. (b)	In IAS computer, IAS stands for:	1.Indian administrative services 2.Institute for Advanced Studies 3.Institute of Arts & Science 4. Institute for Advanced Science
403. (c)	In instruction format, the address of any data location is said to be	1.function code 2.instruction code 3.operand4.logical code
404. (a)	In Intermediate COCOMO the mode that represents complex products is referred to as _____	1.Embedded 2.Semidetached 3.Organic4.Monolithic
405. (b)	In memory interleaving, the lower order bits of the address is used to	1.Get the data 2.Get the address of the module 3.Get the address of the data within the module 4.Get the address of the Program counter
406. (c)	In place of structure which other data type can be used	1. int 2. float 3. class 4. enum
407. (c)	In recursion, the condition for which the function will stop calling itself is _____	1.Best case 2.Worst case 3.Base case4.There is no such condition
408. (b)	In Round Robin CPU scheduling, as the time quantum is increased, the average turn around	1.remains constant 2.varies irregularly3.increases 4.decrease
409. (a)	In select statement display of attributes in ascending is done by using	1. Order By 2. Group By 3. Having 4. Having +order by

410. (d)	In the classical chief programmer team approach, the team member responsible for maintaining the detailed design and coding is maintained by _____	1.The chief programmer 2.The programming secretary 3.The back-up programmer 4.The individual coder (i.e. programmer)
411. (d)	In the following indexed addressing mode instruction, MOV 5(R1),LOC the effective address is _____	1. EA = 5+R1 2. EA = R1 3.EA = [R1] 4.EA = 5+[R1]
412. (c)	In the following process state transition diagram for a uniprocessor system, assume that there are always some processes in the ready state: Now consider the following statements: I.If a process makes a transition D, it would result in another process making transition A immediately. II. A process P2 in blocked state can make transition E while another process P1 is in running state. III. The OS uses preemptive scheduling. IV. The OS uses non-preemptive scheduling. Which of the above statements are TRUE?	1. I and II 2. I and III 3. II and III 4. II and IV
413. (d)	In the operation read_item(x), what does x mean?	1.a file 2.a record 3.a disk block4.all of the options
414. (d)	In two's complement addition, if the last two carry bits are not the same, what does it indicate?	1. carry 2.negative result 3.overflow4.underflow
415. (a)	In which Access method, the Cycle time is Same for all the blocks of memory	1.Random Access 2.Sequential Access 3.Direct Access 4.Semi Random Access
416. (a)	In which mode the main memory location holds the EA of the operand:	1.Immediate addressing 2.Direct addressing 3.Register addressing4.Indirect addressing
417. (d)	In which one of the following page replacement algorithms it is possible for the page fault rate to increase even when the number of allocated frames increases?	1.LRU (Least Recently Used)2.OPT (Optimal Page Replacement) 3.MRU (Most Recently Used) 4.FIFO (First In First Out)
418. (b)	Indefinite blocking is called	1.deadlock 2.Starvation 3.belady anomaly 4.Semaphore
419. (a)	Insert into Emp(101, 'XXX') gives the following error	1.missing Select keyword 2.Missing Values 3.both 4.none

420. (b	Inside which HTML element do we put the JavaScript?	1.javascript 2.script 3.scripting4.vbscript
421. (a)	Is JavaScript case-sensitive?	1.Yes 2.No 3.Sometimes 4.maybe
422. (c)	Is the following piece of code valid? a={3,4,{7,5}} print(a[2][0])	1. Yes, 7 is printed 2. Error, elements of a set can't be printed 3. Error, subsets aren't allowed 4. Yes, {7,5} is printed
423. (d)	JavaScript Code can be called by using	1.RMI 2.Triggering Event 3.Preprocessor4.Function/Method
424. (b)	JavaScript is the same as Java.	1.True 2.False 3.Not always 4.Yes
425. (c)	Join is equal to	1.Cartesian Product 2.Combination of Union and Cartesian product 3.Combination of selection and Cartesian product4.Combination of intersection and Cartesian product
426. (b)	Lactose is a	1.monosaccharide 2.disaccharide 3.homo polysaccharide 4.hetero polysaccharide
427. (a)	Lecithin is a	1.Phospholipid 2.Glycolipid 3.lipoprotein4.glycoprotein
428. (b)	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?	1.2 2.3 3.4 4.5
429. (b)	Let m[0]…m[4] be mutexes (binary semaphores) and P[0] …. P[4] be processes. Suppose each process P[i] executes the following: wait (m[i]); wait(m[(i+1) mode 4]); ------ release (m[i]); release (m[(i+1)mod 4]); This could cause	1.Thrashing 2.Deadlock 3.Starvation, but not deadlock 4.None of the above
430. (b)	Let the page fault service time be 10ms in a computer with average memory access time being 20ns. If one page fault is generated for every 10^6 memory	1.21ns 2.30ns 3.23ns 4.35ns

	accesses, what is the effective access time for the memory?	
431. -	Library function pow() belongs to which header file?	1.mathio.h 2.math.h 3.square.h 4.stdio.h
432. -	Location is which kind of attribute	1. Derived 2. Multivalued 3. Weak 4. Stored
433. -	Loop 'else' block runs if and only if the loop is _____.	1. exited normally 2. breaks 3. does nothing 4. infinite
434. -	Megablast optimizes for	1.Highly similar sequences 2.More dissimilar sequences 3.Somewhat similar sequences4.None of the Above
435. -	Memory Address locations are specified using _____ data representation	1.Sign-magnitude 2.one's complement3.Unsigned 4.two's complement
436. -	Method used for aligning closely related sequence is	1.a. Local alignment 2. b. Pair wise alignment 3.c. Multiple sequence alignment4.d. Global alignment
437. -	Microtubule organizing centre in animal cell is found in	1.Centrosomes 2.Ribosomes3.Glyoxysomes 4.Peroxysomes
438. -	MOLE-BLAST searches………………	1.T cell receptor sequences 2.b. Establish taxonomy for environmental sequences 3.c. Search markers for phylogenetic analysis4.d. Search conserved domain in query sequence
439. -	More emphasis on risk analysis is given in_____	1.Sprial Model 2.Waterfall Model3.Incremental Model 4.Timebox Model
440. -	Most of the naturally occurring aminoacids belong to	1.D-form 2.L- form 3.d-form 4.l-form
441. (b)	Multi-processor system gives a	1.Small system 2.Tightly coupled system3.loosely coupled system 4.Macro system

442. (a)	Multiple sequence alignment tools that displays graphical output	1.Clustal X 2.Clustal W 3.Mult Align 4.Blast
443. (c)	Multiprogramming of computer system increases	1.Memory 2.Storage 3.CPU utilization 4.cost of computation
444. (a)	Myers (1978) identifies seven levels of cohesion. Which level of cohesion may be defined as followed; "the output from one element in the component serves as input for some other element"?	1.Communicational cohesion 2.Functional cohesion 3.Communicational coupling4.Temporal cohesion
445. (b)	nBLAST perform the search with……………query against the ………………database.	1.nucleotide; translated nucleotide 2.b. nucleotide; nucleotide 3.c. translated nucleotide nucleotide 4.d. None of the above
446. (b)	Nesting is particularly useful in distributed systems because it allows	1.serial execution of subtransactions in the server. 2.concurrent execution of subtransactions in separate servers. 3.serial execution of transactions on the remote server. 4.concurrent execution of subtransactions on a remote server.
447. (b)	Normalization of database is essential to (i) avoid accidental deletion of required data when some data is deleted (ii) eliminate inconsistencies when a data item is modified in the database (iii) allows storage of data in a computer's disk (iv) use a database management system	1. i and iii 2. i and ii 3. ii and iii 4. ii and iv
448. (a)	Nouns in a problem statement probably denote	1.Classes 2.Member Functions 3.Data Members 4.Static Variables
449. (c)	Nucleoside contains	1.sugar and nitrogenous base 2.phosphoric acid and sugar 3.nitrogenous base and phosphoric acid 4.only nitrogenous base
450. (a)	Number 84 in BCD is	1.1000 0100 2.0100 0100 3.1000 10104.1000 0000
451. (b)	Object interactions over a specific period of time can be modeled using the	1.Collaboration diagram 2.Sequence diagram 3.Class diagram 4.Data flow diagram
452. (d)	On a write, all other caches with a copy are invalidated, Invalidation is bad when	1.Many producers and single consumer of data. 2.single producer and single consumer of data. 3.Many producers and many consumers of data. 4.single producer and many consumers of data.

453. (b)	Operation is normally specified in one field, known as	1.Operand 2.Opcode 3.Operation4.Instruction

454. (a)	Output of following Java Program?
	
	``java
	class Base {
	   public void show() {
	      System.out.println("Base::show() called");
	   }
	}
	
	class Derived extends Base {
	   public void show() {
	      System.out.println("Derived::show() called");
	   }
	}
	
	public class Main {
	   public static void main(String[] args) {
	      Base b = new Derived();;
	      b.show();
	   }
	}
	``
		1.
		 Derived::show() called
		2.
		Base::show() called
		3.
		 None of the above
		4.
		Compilation error

455. (b)	Output of following program?
	
	``c
	# include <stdio.h>
	void fun(int *ptr)
	{
	   *ptr = 30;
	}
	
	int main()
	{
	  int y = 20;
	  fun(&y);
	  printf("%d", y);
	
	  return 0;
	}
	``
		1.
		20
		2.
		30
		3.
		Compiler Error
		4.
		Runtime Error

456. (b)	Overloading involves	1.. multiple functions with different names. 2.multiple functions defined

		with the same name. 3.one function with multiple names. 4.one function with a variety of arguments.
457. (b)	Overloading involves	1. multiple functions with different names 2. multiple functions defined with the same name 3. one function with multiple names 4. one function with a variety of arguments
458. (a)	Overloading is otherwise called	1. ad hoc polymorphism 2. virtual polymorphism 3. transient polymorphism 4. pseudo polymorphism
459. (b)	pBLAST searches given protein query against ……………..database.	1.Translated nucleotide 2.b. Protein3.c. nucleotide 4.d. All of the above
460. (b)	PCB = ?	1.Program Control Block 2.Process Control Block 3.Process Communication Block 4.None of the above
461. (a)	Perform the subtraction with the following unsigned binary numbers by taking the 2's complement of the subtrahend 11010 - 10000 is	1. 01010 2.1100 3. 101010 4.1011
462. (c)	Phylogenetic relationship can be depicted by a	1.Cladogram 2.Dendogram 3.Both a & b4.Neither a nor b.
463. (a)	Pre-emptive scheduling is the strategy of temporarily suspending a running process	1.before the CPU time slice expires 2.to allow starving processes to run 3.when it requests I/O 4.to avoid collision
464. (a)	Precedence graphs help to find a	1. Serializable schedule 2. Recoverable schedule 3. Deadlock free schedule 4. Cascadeless schedule
465. (c)	Predict the output: fo = open("foo.txt", "rw+") print "Name of the file: ", fo.name # Assuming file has	1.Compilation Error 2.Syntax Error3.Displays Output 4.Nothing is

	following 5 lines # This is 1st line # This is 2nd line # This is 3rd line # This is 4th line # This is 5th line for index in range(5): line = fo.next() print "Line No %d - %s" % (index, line) # Close opened file fo.close()	displayed
466. (b)	Predict the output: import math c=round(4.576) print(c)	1.4 2.5 3.Error 4.4.6
467. (c)	Preemptive scheduling is the strategy of temporarily suspending process	1.when it request (I/O) 2.to allow starving processes to run 3. before the CPU time slice expires 4.none of the above
468. (b)	Private data that is used by a single-processor, then shared data are used by	1.Single processor 2.Multi processor3.Single tasking 4.Multi tasking
469. (d)	Process are classified into different groups in:	1.The shortest job scheduling algorithm 2.round robin scheduling algorithm 3.priority scheduling algorithm 4.multilevel queue scheduling algorithm
470. (c)	Process synchronization can be done on	1.hardware level 2.software level 3.both hardware and software level 4.none of the mentioned
471. (d)	Program for phylogenetic analysis	1.PHILIP 2.PHILIPS 3.PHYLIPS 4.PHYLIP
472. (d)	Programming language with best string handling capability	1.Java 2.C 3.C++ 4.PERL
473. (a)	Project risk factor is considered in which model?	1.Spiral model 2.Waterfall model3.Prototyping model 4.Incremental model
474. (b)	Prokaryotic nuclear material is known as	1.nucleolus 2.nucleoid 3.nucleus4.nucleoside
475. (a)	Prokaryotic ribosomes are	1.70S 2.80S 3.30S 4.50S
476. (b)	Proline cannot stabilize alpha helix because it contains	1.amino group 2.imino group 3.guanidino group 4.indole group
477. (c)	Property of locality of reference may fail if a program has	1.Many conditional jumps 2.Many unconditional jumps 3.Many operands4.Many Operators
478. (d)	Protected base class visibility in public derivation is	1. public 2. private 3. private protected 4. protected
479. (a)	Pseudo-instructions are	1.Assembler directives

		2.Instructions in any program that has corresponding machine code instruction 3.Instruction in any program whose absence will not change the output for any input 4.Used to specify entry and exit of the program
480. (c)	Pumps are membrane proteins involved in	1.diffusion 2.facilitated diffusion 3.primary active transport 4.secondary active transport
481. (a)	Python is a _____ language.	1. Object oriented 2. Procedural oriented 3. Functional 4. Declarative
482. (b)	Quality planning is the process of developing a quality plan for	1.team 2.project 3.customers 4.project manager
483. (b)	Quality planning is the process of developing a quality plan for _____	1.team 2.project 3.customres 4.project manager
484. (a)	Query Tree uses	1.Relational Algebra 2.Tuple Relational Calculus 3.Domain Relational Calculus4.Transaction processing
485. (c)	R(A,B,C,D) is a relation. Which of the following does not have a lossless join dependency preserving BCNF decomposition	1. A->B, B->CD 2. A->B, B->C, C->D 3. AB->C, C->AD 4. A->BCD
486. (a)	RAD Software process model stands for _____ .	1.Rapid Application Development. 2.Relative Application Development. 3.Rapid Application Design. 4.Recent Application Development.
487. (b)	Random access memories are useful in applications where	1.Data consists of numbers 2.Short access time is required 3.Each stored word is processed differently 4.Data naturally needs to flow in and out in serial form

488. (c)	Ras protein is an example for	1.integral protein 2.peripheral protein 3.lipid-anchored protein 4.carrier protein
489. (b)	Read the code shown below carefully and pick out the keys? d = {"john":40, "peter":45}	1. "john", 40, 45, and "peter" 2. "john" and "peter" 3. 40 and 45 4. d = (40:"john", 45:"peter")
490. (d)	Read the following paragraph and identify the correct statement. "Imagine that you were recently hired as a software engineer to a company that specializes in aircraft navigation control software. While orientating yourselves to the company's work practices, you observe that they in fact do not conduct a few tests that they should in order to comply with the relevant safety standard. When you inquire about this from the project manager, he dismisses it saying that those tests are really unnecessary (and takes an unreasonably long time to conduct, as well as being superfluous) and that they have managed with the other tests for so long, without any problems."	1.a) You should immediately resign from the company and file a complaint with the relevant standard institution 2.You should do nothing and let the matter slide 3.Although you are new to the company, and you hardly know anything about the internal processes and politics, you should insist on the company changing its work practices immediately; failing which you threaten to report the matter 4.Since you are new to the company, and you are unfamiliar with the internal processes and politics, you should first find-out more about the issue and its background
491. (c)	Refining an initial prototype through a number of stages to produce the final system is called	1.Throw away prototyping 2.Initial Prototyping 3.Evolutionary Prototyping 4.Waterfall model
492. (b)	Related fields in a database are grouped to form	1. data fields 2. data record 3. menu 4. bank
493. (d)	Represent -14 in signed magnitude,1's complement and in 2's complement form	1.10001110, 11110000, 111100102.01111110, 11110000, 111100103.10011110, 11110000, 111100104.10001110, 11110001, 11110010
494. (c)	Rigorous two-phase locking protocol permits releasing all locks at	1.beginning of transaction 2.middle of execution of transaction 3.end of

		the transaction 4.never in the lifetime of transaction
495. (d)	Risk management is responsibility of the	1.Customer 2.Investor 3.Developer 4.Project Team
496. (a)	Round robin scheduling is essentially the preemptive version of _____.	1.FIFO 2. Shortest job first 3.Shortest remaining 4.Longest time first
497. (d)	RUP stands for_____ created by a division of _____.	1.Rational Unified Program, IBM 2.Rational Unified Process, Infosys 3.Rational Unified Process, Microsoft 4.Rational Unified Process, IBM
498. (a)	Scheduling is done so as to	1.increase CPU utilization 2.decrease CPU utilization 3.keep the CPU more idle 4.None of these
499. (c)	Scheduling of threads is done by	1.input 2.output 3.Operating System4.memory
500. (b)	Secondary structure of protein is mainly stabilized by	1.peptide bonds 2.hydrogen bonds 3.Ionic bonds 4.hydrophilic bonds
501. (d)	Select the conflicting operation:	1.r1(x), w2(y) 2.r1(x), w1(x) 3.w1(y), w2(x)4.r1(x), w2(x)
502. (c)	Select the rule for committing nested transactions:	1.When a subtransaction aborts, the parent cannot decide whether to abort or not.2.When a parent aborts, all of its subtransactions are not aborted. 3.When a subtransaction completes, it makes an independent decision either to commit provisionally or to abort. Its decision to abort is final. 4.A transaction cannot commit or abort only after its child transactions have completed.
503. (d)	Sequence alignment is used to	1.a. Predict new gene families 2. b. To infer the functions of newly synthesized genes 3.c. Find the Evolutionary relationships 4.d. All the above
504. (c)	Sequence alignment tool provided by EBI is	1.a. Clustal W 2.b. BLAST 3.c. FASTA 4. d. Chime
505. (b)	Set of actions performed by external users of a system is modeled using	1.Collaboration diagram 2.Sequence diagram3.Use case diagram 4.Package diagram
506. (a)	Shell is the exclusive feature of	1.UNIX 2.DOS 3.System Software4.Application Software
507. (c)	Sialic acid is found in which type of glycolipid?	1.Cerebroside 2.Globoside 3.Ganglioside4.galactolipid

508. (d)	Simultaneous alignment of many sequences is known as	1.a. Local Alignment 2.b. Global Alignment 3.c. Pairwise alignment 4. d. Multiple sequence Alignment
509. (a)	Single-line comments begin with the _____ character	1. Hash (#) 2. Ampersand (&) 3. Hyphen (-) 4. Exclamatory (!)
510. (b)	Smooth endoplasmic reticulum is mainly involved in	1.protein synthesis 2.lipid synthesis 3.sugar synthesis 4.nucleotide synthesis
511. (a)	Software Configuration Management can be administered in several ways. It include _____ _	1.A single software configuration management team for the whole organization 2.A separate configuration management team for each project3.Software Configuration Management distributed among the project members4.A multiple hardware configuration management teams for the whoel organization
512. (c)	Sometimes a single value for a data member applies to all members of class, for this purpose a	1.Private data members are declared 2. Variable data members are declared 3. Static data members are declared 4. Public data members are declared
513. (c)	Specify the 2 library functions to dynamically allocate memory?	1.malloc() and memalloc() 2.alloc() and memalloc() 3.malloc() and calloc()4.memalloc() and faralloc()
514. (b)	Specify the condition for overflow in 2's complement data representation	1.cin(xor) cout =1 2.cin (xor) cout =0 3.cout = 0 4.cout =1
515. (a)	Sphingomyelin is a	1.glycolipid 2.phospho glycolipid 3.lipo protein 4.glycero phospholipid
516. (a)	Spurious tuples are formed because of	1.join operation done on a non-key attribute 2.outer join operation3.transitive dependencies 4.Partial dependencies
517. (b)	Staff turnover, poor communication with the customer are risks that are extrapolated from past experience are called _____ .	1.Business risks 2.Predictable risks 3.Project risks 4.Technical risks

518. (a)	State Machine diagrams fall under the	1.Behavioral model 2.Context model3.Data model 4.software process model
519. (b)	Structures must have	1. Public Access Type 2. Private Access Type 3. Protected Access Type 4. Private Protected Access Type
520. (b)	Sucrose is a non-reducing sugar, because of the	1.presence of anomeric carbon atoms2.absence of anomeric carbon atoms3.presence of fructose 4.presence of glucose
521. (a)	Suppose that a 2M x 16 main memory is built using 256K x 8 RAM chips and memory is word-addressable. A) How many RAM chips are necessary? B) How many RAM chips are there per memory word?	1.16,2 2.15,4 3.14,3 4.16,4
522. (a)	Suppose we're debugging a quicksort implementation that is supposed to sort an array in ascending order. After the first partition step has been completed, the contents of the array are in the following order: 3 9 1 14 17 24 22 20 Which of the following statements is correct about the partition step?	1.The pivot could have been either 14 or 17 2.The pivot could have been 14, but could not have been 17 3.The pivot could have been 17, but could not have been 144.Neither 14 nor 17 could have been the pivot
523. (a)	Suppose you are given an array s[1....n] and a procedure reverse(s,i,j) which reverses the order of elements in between positions i and j (both inclusive). what does the following sequence do, where 1<=k<=n: reverse(s,1,k); reverse(s,k+1,n); reverse(s,1,n);	1. Rotates s left by k positions 2. Leaves s unchanged 3. Reverses all elements of s 4. Rotates s right by k positions
524. (a)	Switching the CPU to another Process requires to save state of the old process and loading new process state is called as _____.	1.Context Switch 2.Process Blocking 3.Time Sharing 4.None of the above
525. (c)	The _____ addressing mode is similar to register indirect addressing mode, except that an offset is added to the contents of the register. The offset and register are specified in the instruction.	1.Base indexed 2.Base indexed plus displacement 3.Indexed 4.Displacement
526. (d)	The ability to define several functions with the same is	1.operator overloading 2.method overloading3.overloading

		4.function overloading
527. (b)	The absorbance of DNA after DNA denaturation is said to be	1.hypochromic 2.hyperchromic 3.palindromic4.no effect
528. (b)	The access mode of Magnetic Disk is	1.Sequential access 2.Random access 3.Associative access 4.Semi-Random access
529. (a)	The access mode of Magnetic Tape is	1.Sequential access 2.Random access3.Associative access 4. SemiRandom access
530. (b)	The access mode of RAM is	1.Sequential access 2.Random access3.Associative access 4.SemiRandom access
531. (a)	The actual data stored in database at particular time is	1. Instance 2. Schema 3. Constrains 4. Key Value pair
532. (a)	The addressing mode, where you directly specify the operand value is _____	1.Immediate 2.Direct 3.Indirect 4.Relative
533. (d)	The aim of software design that helps the software engineering to produce software that is _____	1.with error 2.postpond of delivery 3.not in control of budget 4.satisfies the users' technical requirements
534. (c)	The alignment method suitable for finding out locally conserved patterns in DNA or protein sequences is	1.pairwise alignment 2.global alignment 3.local alignment 4.multiple sequence alignment
535. (b)	The amino acid present in bacterial cell walls is	1.) D-alanine 2. b) L- alanine 3. c) D-glycine4. d) L-glycine
536. (b)	The analysis of T cell receptor sequences is performed by…………………	1.MOLE-BLAST 2. b. IgBLAST 3.c. CDART4.d. All of the above
537. -	The approach where the memory contents are transferred directly to the processor from the memory is called _____	1. Read-later 2.Read-through 3.load through4. Dirty bit
538. (c)	The architectural design that isolates application logic from User inteface layer and supports separation of concerns is	1.Client Server Architecture 2.Pipe File Architecture 3.Model View Controller Architecture 4.Publisher Subscriber Architecture
539. (d)	The arrangement of subunits in a given protein is explained by	1.primary structure 2.secondary structure3.tertiary structure 4.quarternary structure
540. -	The aspect of _____ is achieved by running transactions so that their effects are serially	1.granularity 2.consistency 3.modularity4.atomicity

	equivalent.	
541. (b)	The availability of more than one unique key is known as	1. Primary key 2. Candidate key 3. Foreign key 4. Super Key
542. (b)	The backbone of glycolipids is	1.phosphatidic acid 2.ceramide3.cerebroside 4.cephalin
543. (c)	The Banker's algorithm is used	1.to rectify a deadlocked state 2.to detect deadlock in operating systems 3.to prevent deadlock in operating systems 4.none of the above
544. (c)	The basic concept of fifth NF is	1. lossless join 2. Multivalued dependency 3. consistency 4. Partial Dependency
545. (b)	The basic concept of fourth NF is	1. lossless join 2. Multivalued dependency 3. consistency 4. Persistance
546. (d)	The basic purpose of the toLocaleString() is to	1.return a localised object representation2.return a parsed string 3.return a local time in the string format 4.return a localized string representation of the object
547. (d)	The basic run time entities in OOP are	1.Functions 2.Classes 3.Data and codes4.Objects
548. (a)	The behavior of an object through many use cases can be modeled using the	1.Use case diagram 2.Sequence diagram3.State chart diagram 4.Collaboration diagram
549. (b)	The best way to test the Software Project Management Plan (SPMP) is by _____	1.Prototyping 2.Inspection 3.Simulation4.Compilation
550. (c)	The calls between different objects in a system is	1.Class Diagram 2.Data Flow Diagram3.Sequence Diagram 4.Use-

	modelled using	Case Diagram
551. (b)	The candidate keys that are not selected as the Primary key are known as _____.	1. super key 2. alternate keys 3. secondary key 4. foreign key
552. (a)	The change in pH affect the stability of protein by altering	1.hydrogen bond 2.Hydrophobic bond 3.ionic bond 4.peptide bond
553. (d)	The character Dot (that is, '.') in the default mode, matches any character other than _____ in regular expressions.	1.caret 2.ampersand 3.Percentage symbol4.New Line
554. (c)	The circular wait condition can be prevented by:	1.using pipes 2. using thread 3.defining a linear ordering of resource types 4.all of the mentioned
555. (a)	The code which uses 7 bits to represent a character is	1.ASCII 2.BCD 3. EBCDIC 4.Gray
556. (a)	The coherence mechanism must now ensure that all operations performed on these copies are serializable, which ensures that	1.concurrent order of instruction execution should not exist. 2.there exists some concurrent order of instruction execution that corresponds to the serial schedule 3.there exists some serial order of instruction execution that corresponds to the parallel schedule 4.serial order of instruction execution should not exist.
557. (c)	The combination to find super key for n elements is	1. 2 plus n 2. 2 cross n 3. 2 power n 4. 2 mod n
558. (b)	The concept of two two functions with same name is know as?	1.Operator Overloading 2.Function Overloading 3.Function Overriding4.Function renaming
559. (a)	The concurrency control technique to block an operation of a transaction, if it may cause a violation of the rules until the possibility of violation disappears is termed as	1.Pessimistic concurrency control mechanism 2.Optimistic concurrency control mechanism 3.Semi-optimistic concurrency control mechanism 4.Semi-

		pessimistic concurrency control mechanism
560. (c)	The condition for First NF is	1. No repeated candidate keys 2. table column must be same 3. No repeated columns 4. partial dependency
561. (c)	The condition for First NF is	1. No repeated candidate keys 2. table column must be same 3. No repeated columns 4. No repeated datatype
562. (c)	The conserved pattern in DNA sequence is found using	1.a. Local alignment 2. b. Global alignment 3.c. Pairwise alignment 4.d. Multiple alignment
563. (a)	The constrain of primary key is	1. Unique 2. Not null 3. Unique+Not null 4. case sensitive
564. (d)	The context diagram is also known as	1.Level-1 DFD 2.Level-2 DFD 3.Level-3 DFD4.Level-0 DFD
565. (c)	The controller of computer system transfers data from a device to	1.buffers 2.cache 3.registers 4.indexes
566. (c)	The CPU of a Computer takes instruction from the memory and executes them. This process is called	1.Load cycle 2.Time sequence 3.Fetch-execute cycle 4.Memory reference Cycle
567. (a)	The Create and Alter statements are	1. DDL statements 2. DML statements 3. DDL+DML statements 4. DTL statements
568. (b)	The data elements in structure are also known as ?	1. data 2.

			members 3. objects 4. variables
569. (c)	The database schema is written in		1.HLL 2.DML 3.DDL 4.DCL
570. (b)	The decimal value 0.25		1.is equivalent to the binary value 0.1 2.is equivalent to the binary value 0.01 3. is equivalent to the binary value 0.00111…. 4. cannot be represented precisely in binary
571. (a)	The definition of database is		1. collection of data 2. collection of related data 3. collection of raw data 4. collection of raw information
572. (c)	The definition of RDBMS is		1. Tuples 2. Domain 3. Tuples+Relations 4. Tuples+ domain
573. (b)	The degree of a leaf node of a tree is		1.1 2.0 3.-1 4.2
574. (d)	The degree of interaction between two modules is known as		1.Cohesion 2.Strength 3.Inheritance4.Coupling
575. (c)	The dependents entity in an organisation relation is		1. Normal Entity 2. Multivalued entity 3. Weak entity 4. Deterministic entity
576. (a)	The device which is used to connect a peripheral to bus is known as		1.control register 2.Interface 3.communication protocol 4.I/O Bus
577. (c)	The drawback of building a large memory with DRAM is		1.The large cost factor. 2.The inefficient memory organization. 3.The Slow speed of operation. 4.all the above.
578. (a)	The effectiveness of the cache memory is based on		1. Locality of reference 2.Memory localization3.Memory size 4.Access

	the property of _____	Time
579. (a)	The entity represented by discriminator set is	1. Weak entity set 2. Strong entity set 3. Discriminator entity set 4. normal entity set
580. (c)	The exoskeleton found in insects is made up of	1.cellulose 2.glycogen 3.chitin 4.heparin
581. (b)	The expression a{5} will match _____ characters with the previous regular expression.	1.5 or less 2.Exactly 5 3.5 or more 4.Exactly 4
582. (c)	The extra time needed to bring the data into memory in case of a miss is called as _____	1.Delay 2.Propagation time 3.Miss penalty4.Effective Access Time
583. (a)	The FD A->B, DB->C implies	1. DA->C 2. A->C 3. B->A 4. DB->A
584. (b)	The final outcome of the requirements analysis and specification phase is	1.Data Flow Diagram 2.Software Requirements Specification Document3.Code 4.User Manual
585. (c)	The flow of data and decisions within an use case can be modeled using	1.Use case diagram 2.Sequence Diagram 3. Activity Diagram 4.Class Diagram
586. (b)	The following is property of second NF	1. Agglomeration 2. partial dependency 3. Transitive dependency 4. Trivial dependency
587. (c)	The following is property of third NF	1. Agglomeration 2. partial dependency 3. Transitive dependency 4. Persistant

588. (c)	The formation of microvilli of intestinal cells is due to	1.intermediate filaments 2.microtubules3.actin filaments 4.thick filaments
589. (c)	The full form of DDL is	1.Dynamic Data Language 2.Detailed Data Language 3.Data Definition Language 4.Data Derivation Language
590. (c)	The function pow(x,y,z) is evaluated as:	1.(x**y)**z 2.(x**y) / z 3.(x**y) % z 4.(x**y)*z
591. (b)	The glycolipids and glycoproteins together in the membrane form	1.glycocalyx 2.lipid raft 3.bilayer 4.lipoprotein
592. (d)	The height of a tree is the maximum number of edges from the root to a leaf. What is the minimum and maximum possible height of a binary search tree with 15 nodes?	1.3, 3 2.7, 15 3.3, 14 4.4, 14
593. (d)	The height of a tree is the maximum number of edges from the root to a leaf. What is the minimum and maximum possible height of a binary search tree with 15 nodes?	1.3, 3 2.7, 15 3.3, 14 4.4, 14
594. (b)	The hexadecimal number equivalent to (1762.46)8 is	1.3F2.89 2.3F2.98 3.2F3.89 4.2F3.98
595. (c)	The instruction, Add #45,R1 does _____	1.Adds the value of 45 to the address of R1 and stores 45 in that address 2.Adds 45 to the value of R1 and stores it in R1 3.Finds the memory location 45 and adds that content to that of R1 4.None of the mentioned
596. (c)	The JavaScript class represents regular expressions, and both string and ……….……….. define methods that use regular expressions.	1.RegExpObj 2.RegExpClass 3.RegExp4.StringExp
597. (b)	The level of data abstraction which describes how the data is stored is	1.Conceptual level 2.Physical level 3.File level 4.None of the options
598. -	The longer a fault exists in software	1.the more tedious its removal becomes2.the less costly it is to detect and correct3.the more likely it is to be properly corrected4.it is not at all a biggest problem and it can be rectified at the end of project completion.
599. (b)	The LRU algorithm	1.pages out pages that have been used recently 2.pages out pages that have not been used recently 3. pages out pages that have been least used recently 4.pages out the first page in a given area

600. (b)	The main role of Golgi complex is in	1.protein synthesis 2.protein packaging3.protein degradation 4.lipid synthesis
601. (a) withstand mechanical stress	The main function of intermediate filament is to	1. withstand mechanical stress 2. help in vesicular transport 3.position the organelles4. alter the shape of the membrane
602. (a) ABR	The main memory is structured into modules each with its own address register called _____	1.ABR 2.TLB 3.PC 4.IR
603. (b) volatile	The main memory of a computer system is known to be	1.non-volatile 2.volatile 3.reserved4.Restricted
604. -----	The melting temperature is the temperature at which -----------% of DNA denaturation occurs.	1.25% 2.50% 3.75% 4.100%
605. (c) Direct	The method of mapping the consecutive memory blocks to consecutive cache blocks is called _____	1.Set-associative 2. Associative 3.Direct4.Indirect
606. (a) Instruction set architecture	The minimum number of page frames that must be allocated to a running process in a virtual memory environment is determined by	1. the instruction set architecture 2.page size3.physical memory size 4.number of processes in memory
607. (a) Cycle Time	The minimum time delay between two successive memory read operations is _____.	1.Cycle time 2.Delay 3.Latency 4.access time
608. (a) Conflict	The misses that occur due to an empty cache are called ---------------- misses	1.Conflict 2.Coherence 3.Compulsory4.Capacity
609. (b) Semi-conservative	The mode of DNA replication is	1.Conservative 2.Semi-conservative3.Dispersive 4.self
610. (c) Myosin I	The motor protein found in actin filament is	1.kinesin 2.dynein 3.myosin I 4.myosin II
611. (d) 2^n vertices	The n-dimensional hypercube graph (where n is a positive integer) has	1.n vertices 2.2*n vertices 3.n^2 vertices4.2^n vertices
612. (d) Phosphodiester bonds	The nucleotides in nucleic acid are connected by	1.peptide bond 2.glycosidic bond 3.ester bond 4.phosphodiester bond
613. (c) 4	The number of chiral carbon atoms found in glucose is	1.2 2.3 3.4 4.5
614. (b) 2	The number of double bonds found in linoleic acid is	1.1 2.2 3.3 4.4
615. (b) Be equal to	The number of flows that leave a fork should _____ the number of flows entering the corresponding join in an activity diagram	1.be greater then 2.be equal to 3.be lesser than 4.be equal to or greater than
616. (d) 16	The number of posssible steroisomers for ribose is	1.2 2.4 3.8 4.16

617. (b) Throuhghput	The number of processes completed per unit time is known as _____	1.Output 2.Throughput 3.Efficiency 4.Capacity
618. (c) Total Ordering	The ORDER concurrency control technique is based on one of the following property:	1.ordering mechanism 2.inherent ordering3.total ordering 4.partial ordering
619. (a) LIFO	The order in which the return addresses are generated and used in _____order	1. LIFO 2.FIFO 3.Random 4. Highest priority

620. (b) Nothing would be printed	The output of the below program is :
	
	class Mycpp
	{
	
	};
	
	int main()
	{
	  Mycpp obj;
	  return 0;
	}
		1.
		Compilation Error - Constructor Missing
		2.
		Nothing would be printed
		3.
		Undefined
		4.
		In constructor

621. (d)	The pH at which the netcharge of aminoacid is zero is said to be	1.Neutral pH 2.acidic pH 3.basic pH 4.iso electric pH
622. (d)	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?	1.10,20,15,23,25,35,42,39,302.15,10,25,23,20,42,35,39,303.15,20,10,23,25,42,35,39,304.15,10,23,25,20,35,42,39,30
623. (d) MSA	The procedure of aligning many sequences simultaneously is called	1.pairwise alignment 2.global alignment 3.local alignment 4.MSA
624. (b) Local Alignment	The procedure used to align regions with high level of matches without considering the alignment of rest of the sequence is known as	1.a. Global alignment 2. b. Local alignment 3.c. Pair wise alignment 4. d. None of these
625. (c) Project Management Life Cycle	The process each manager follows during the life of a project is known as	1.Project Management 2.Manager life cycle3.Project Management Life Cycle 4.Product specfication delays
626. (a) Reverse Engg	The process of extraction of design patterns from source code is known as	1.Reverse Engineering 2.Re Engineering3.Forward Engineering 4.Forward Engineering
627. (b) Process	The process of identifying the sub-process of process	1.Process introduction 2.Process analysis 3.De-processification

Analysis	improvement is	4.Process distribution
628. (b) Ready Queue	The processes that are residing in main memory and are ready and waiting to execute are kept on a list called:	1.job queue 2.ready queue 3.execution queue 4.process queue
629. (b) Attributes	The properties of an entity in an ER model is called	1.Relationships 2.Attributes 3.Domain4.Cardinality
630. (b) Integrin	The protein found in the membrane that connects adjacent cell is	1.calmodulin 2.integrin 3.spectrin 4.ankyrin
631. (a) Keratin	The proteins found in intermediate filaments of epithelial cells are	1.keratin 2.neurofilament 3.actin 4.tubulin
632. (c) To deal with relationships	The purpose of an N-Ary association is:	1. to capture a parent-child relationship 2. to deal with one to many relationships 3. to deal with relationships that involve more than two tables 4. to represent an inheritance relationship
633. (a) copy from disk to main memory	The read(x) does the following	1. copy data from disk to main memory 2. copy data from main memory to disk 3. copy data from Secondary memory to disk 4. copy data from disk to secondary memory
634. (c)	The regions connecting the secondary structure of protein are	1.turns 2.loops 3.both turns and loops 4.no turns and loops
635. (a) MAR	The register that includes the address of the memory unit is termed as the ____:	1. MAR 2. PC 3.IR 4.MBR
636. (b)	The relation between employee and department entity is	1. 1:N 2. M:1 3. N:M

		4. 0:0
637. (b) Inheritance	The relationship between a derived class (or subclass) and base class is referred to as	1.Association 2.Inheritance 3.Polymorphism4.Instantiation
638. (c)	The relationship between teachers and students is	1. 1:N 2. M:1 3. N:M 4. 0:0
639. (b) 350	The result of evaluating the postfix expression 5, 4, 6, +, *, 4, 9, 3, /, +, * is?	1. 600 2. 350 3. 650 4. 588
640. (a)	The RUP is normally described from three perspectives-dynamic, static & practice. What does static perspective do ?	1.It shows the process activities that are enacted. 2.It suggests good practices to be used during the process. 3.It shows the phases of the model over time. 4.It is not a good practice during the process.
641. ------	The schedule: r1(x), w1(x), r2(x), w2(y), w2(y), r1(y)	1.Serializable 2.Non-serializable 3.cant say4.depends on DBMS
642. (a)	The SDRAM performs operation on the _____	1.Rising edge of the clock 2. Falling edge of the clock 3. Middle state of the clock4.Transition state of the clock
643. (c)	The selection of data with boundary counditions is obtained by	1. Between 2. In 3. Default 4. Like
644. (b)	The separation of the data definition from the program is known as:	1. data dictionary 2. data independence 3. data integrity 4. referential integrity

645. (b) D	The single letter code for the amino acid aspartic acid is	1.A 2.D 3.E 4.K
646. (c) E	The single letter code for the amino acid glutamic acid is	1.A 2.G 3.E 4.K
647. (d) Deadlock	The situation in which a transaction holds a data item and waits for the release of data item held by some other transaction, which in turn waits for another transaction, is called …….	1.serializable schedule 2.process waiting3.concurrency 4.deadlock
648. (d) State	The Snapshot of a table is called as	1.Intension 2.Extension 3.Schema construct4.State
649. (d)	The snippet that has to be used to check if "a" is not equal to "null" is	1.if(a!=null) 2.if (!a) 3.if(a!null) 4.if(a!==null)
650. (a) Requirements	The software life cycle can be said to consist of a series of phases. The classical model is referred to as the waterfall model. Which phase may be defined as "The concept is explored and refined, and the client's requirements are elicited?"	1.Requirements 2.Specification 3.Design4.Implementation
651. (d)	The spatial aspect of the locality of reference means	1.That the recently executed instruction is executed again next 2.That the recently executed won't be executed again 3. That the instruction executed will be executed at a later time 4.That the instruction in close proximity of the instruction executed will be executed in future
652. (a) Preemptive	The strategy of allowing processes that are logically runnable to be temporarily suspended is called	1.preemptive scheduling 2.Non-Preemptive preemptive scheduling 3. shortest job first4.first come first served
653. (c)	The structural difference between glycogen and amylopectin is mainly based on	1.its components 2.its linkage 3.the number of branches 4.its solubility
654. (d)	The structure of alpha helix is not stabilized by repeated number of glutamic acid due to	1.electrostatic attraction 2.electrostatic repulsion 3.its bulkiness 4.its flexibility in conformation change
655. (d)	The substring operations in SQL is done by	1. Having clause 2. Like operator 3. In operator 4. Between Operator

656. (b) Deoxyribose	The sugar found in DNA is	1.Ribose 2.Deoxyribose 3.Deoxyglucose4.Deoxygalactose
657. (c) Associative Search	The technique of searching for a block by going through all the tags is _____	1.Linear search 2.Binary search 3.Associative search 4.Set Associative
658. -----	The temporal aspect of the locality of reference means	1. That the recently executed instruction won't be executed soon 2.That the recently executed instruction is temporarily not referenced 3.That the recently executed instruction will be executed soon again 4.That the instruction executed will be executed at a later time
659. (d) Clustal W	The tool used for multiple sequence alignment is	1.a. PDB 2. b. Dismol 3.c. Chime 4.d. Clustal W
660. (a) Exclusive Mode	The transaction wants to edit the data item is called as ……	1.Exclusive Mode 2.Shared Mode 3.Inclusive Mode 4.Unshared Mode
661. ----	The two's complement representation of –10 in 8 bits is:	1.11110110 2.11011001 3. 000010104.11111100
662. (b) Object	The unordered collection of properties, each of which has a name and a value is called	1.String 2.Object 3.Serialized Object 4.String Object
663. (b) DML Statements	The Update statements are	1. DDL statements 2. DML statements 3. DDL+DML statements 4. DTL statements
664. (b) 7	The value of the expression: 4 + 3 % 5	1.4 2.7 3.2 4.0
665. (b) copy from main memory to disk	The Write(x) does the following	1. copy data from disk to main memory 2. copy data from main memory to disk 3. copy data from Secondary memory to disk 4. copy data from disk to Secondary memory

666. (c) to write directly on the memory and cache	The write-through procedure is used	1.To write onto the memory directly 2.To write and read from memory simultaneously3.To write directly on the memory and the cache simultaneously 4.To Write onto the memory only at the end
667. (b) math	The exact 'pi' value can be utilized in the python program by importing _____ library.	1. bulitins 2. math 3. sys 4. re
668. (b) 2	There are how many ways in C++ to pass an arguments to a function?	1.1 2.2 3.3 4.4
669. (b) 5-methyl uracil	Thymine is	1.3- methyl uracil 2.5-methyl uracil 3.2- methyl uracil 4.4-methyl uracil
670. (c) 10ms	To a rough order of magnitude, what is the access time of a typical modern hard drive?	1.0.1ms 2.1ms 3.10ms 4.100ms
671. ----	To allow transactions the choice of either committing or aborting, their operations are performed in	1.tentative versions that cannot be accessed by other transactions. 2.real objects that can be accessed by other transactions.3.permanent storage that can be accessed by other transactions. 4.a central server that cannot be accessed by other transactions.
672. (d) tristate buffer : to avoid loading during read	To avoid loading during a read operation, the device used is	1.latch 2.flipflop 3.buffer 4.tristate buffer
673. (c) functions	To make large programs more manageable programmers modularize them into subprograms that are called	1.Operators 2.Classes 3.Functions 4.Abstract Classes
674. (c) Activity diagram	To model work flow connections and parallel processes across use cases we use	1.State Chart Diagrams 2.Use Case Diagrams 3.Activity Diagrams 4.Collaboration diagrams
675. (d) right by 1 bit	To reduce the exponent value by 2, the radix point is moved towards	1.left by 2 bits 2.right by 2 bits 3.left by 1 bit4.right by 1 bit
676. -----	To select check box only, what selector should be used? <input type="button" value="Button" />	1.input@checkbox{ ... } 2.input.checkbox{ ... }3.input.type=checkbox{ ...

	<input type="submit" value="Submit button" /> <input type="checkbox" value="value" /> <input type="text" value="Bal bla" />	}4.input[type=checkbox]{ … }
677. -----	To select submit button only, what selector should be used? <input type="button" value="Button" /> <input type="submit" value="Submit button" /> <input type="checkbox" value="value" /> <input type="text" value="Bal bla" />	1.input@submit{ … } 2.input.submit{ … }3.input.type=submit{ … } 4.input[type=submit]{ … }
678. -----	To select text box only, what selector should be used? <input type="button" value="Button" /> <input type="submit" value="Submit button" /> <input type="checkbox" value="value" /> <input type="text" value="Bal bla" />	1.input@text{ … } 2.input.text{ … }3.input.type=text{ … } 4.input[type=text]{ … }
679. (a) window	To which object does the location property belong?	1.Window 2.Position 3.Element 4.Location
680. (a)	Transaction Serialization refers to	1.Reads/Writes to a different memory location must be seen by central server processor in the serial order. 2.Reads/Writes to a different memory location must be seen by central server processor in the same order.3.Reads/Writes to a single memory location must be seen by central server processor in the serial order. 4.Reads/Writes to a single memory location must be seen by all processors in the same order.
681. (a) True	Two sets of functional dependencies E and F are equivalent if E+ = F+ .This statement is	1.True 2.False 3.Some times 4.Depends on DBMS
682. (a)	UML stands for	1.Unified Modeling Language 2.Unified Modifying Language 3.Unified Mobile Language 4.Unified Module Language
683. (a) State Diagram	UML supports event based modelling using	1.State Diagram 2.Use Case Diagrams 3.Package Diagrams 4.Activity Diagrams
684. (c) Block Size	Unit of data exchange between cache and main memory is known as	1.Cache Memory 2. Cache Size 3.Block Size4.Mapping Function
685. (a)	Unsaturated fatty acids have low melting point because they have	1.more Vander Wall interactions 2.less Vander Wall interactions 3.more number of hydrogen bonding 4.less number of hydrogen bonding

686. (b) RNA	Uracil is found in	1.DNA 2.RNA 3.both DNA and RNA 4.none
687. (c)	Waxes does not contain	1.fatty acid 2.long chain alcohol 3.glycerol4.Both glycerol and fatty acid
688. (b)	What are all the properties a border needs?	1.border-width 2.border-style, border-width, border-color 3.1px 4.border-solid
689. (a) 8,15	What are the minimum and maximum possible number of nodes in a heap of height 3?	1.8, 15 2.7, 16 3.7, 15 4.8, 16
690. (a)	What are the outcomes of the functions shown below? sum(2,4,6) sum([1,2,3])	1.Error, 6 2.12, Error 3.12, 6 4.Error, Error
691. (b) Registers	What are the small high speed memory units used for storing temporary results?	1.CPU 2. Registers 3.Control unit 4. ALU
692. (b) Version Control	What combines procedures and tools to manage different versions of configuration objects that are created during the software process?	1.change control 2.version control 3.SCIs4.CMM
693. (a)Software configuration audit	What complements the formal technical review by assessing a configuration object for characteristics that are generally not considered during review?	1.Software configuration audit 2.Software configuration management 3.Baseline4.software external audit
694. (b) Data coupling	What do you call when two modules are coupled ,when they communicate via a composite data item	1.Stamp Coupling 2.Data Coupling3.Content Coupling 4.Control Coupling
695. -----	What Does The Method Returns?	1.str 2.list of single characters 3.a list of lines4.list of integers
696. (c)target elements that do not match the	What does the :not pseudo selector do?	1.It styles only that element and nothing else2.It detaches styles from everything but that3. It allows you to target elements that do not match the selector you are presenting 4.It selects all the elements in the page

697. (d)	What does the following program print?
	
	#include<stdio.h>
	
	void f(int *p, int *q)
	
	{
	
	  p=q;
	
	  *p=2;
	
	}
	
	int i=0, j=1;
		1.
		2 2
		2.
		2 1
		3.
		0 1
		4.
		0 2

	int main()
	
	{
	
	  f(&i,&j);
	
	  print("%d %d\n", i, j);
	
	  return 0;
	
	}	

698. (d)	What happens when you search for 35 in the list [10,20,30,40,50]?	1.The program would handle the case by printing a suitable message that the element is not found 2.The value 30 is returned as it is the closest number less than 35 that is present in the list 3.The value 40 is returned as it is the closest number greater than 35 that is present in the list 4.The program will abruptly come to an end without intimating anything to the user.
699. (b) Release Management	What involves preparing software for external release and keeping track of the system versions that have been released for customer use?	1.System building 2.Release management3.Change management 4.Version management
700. (c) Exponent is smaller than -127	What is exponent underflow in IEEE 754 single precision format?	1.Exponent is equal to zero 2.Exponent is greater than 127 3.Exponent is smaller than -127 4.Exponent is equal to 127
701. (a)	What is ILP?	1. instruction-level parallelism 2.instruction-level panel3.instruction-language panel 4.inter-language parallelism
702. -----	What is related to the overall functionality of the delivered software?	1.Function-related metrics 2.Product-related metrics3.Size-related metrics 4.Team related cost
703. (c)	What is singleton class?	1. We can create n number of object 2. We can create max 256 objects 3. We can create only one object 4. We cant create object
704. -----	What is the addressing mode used in instruction ADD for the stack organized machine?	1.Implied 2. Direct 3.Register 4.Indirect
705. (c)	What is the best definition of a collision in a hash	1.Two entries are identical except for their keys. 2.Two entries with

	table?	different data have the exact same key.3.Two entries with different keys have the same exact hash value. 4.Two entries with the exact same key have different hash values.
706. ----	What is the common issue in signed numbers and 1's complement representation	1.Human readable 2.2 representations for 0 3.2 representations for 1 4.2 representations for every number
707. (b)	What is the correct JavaScript syntax to change the content of the HTML element with id="demo"?	1. document.getByIdElement("demo") .innerHTML = "WD!";2.document.getElementById("demo").innerHTML = "WD!";3.document.getElementByNa me("demo").innerHTML = "WD!";4.document.getElementByNa meId("demo").innerHTML = "WD!";
708. (a)	What is the correct syntax to send a 3-dimensional array as a parameter? (Assuming declaration int a[5][4][3];)	1.func(a); 2.func(&a); 3.func(*a); 4.func(**a);
709. (b)	What is the desirable properties of a decomposition?	1. Data Consistency 2. Dependency preservation 3. Redundancy 4. Security
710. (c)	What is the duration of a time quantum in Round-Robin Scheduling?	1.10-100 millisecond 2.10-100 nanosec 3.100-1000 millisecond 4.100-1000 nano sec
711. (a) 1	What is the Edit distance between ATCGC and ATGGC?	1.1 2.2 3.3 4.4
712. (d) 4	What is the Edit distance between the words DECLENSION and RECREATION?	1.1 2.2 3.3 4.4
713. ----	What is the highest normal form level satisfied by the following table design? R={A1,A2,A3,A4,A5} F={A1-> A3, A3->A4}Key ={A1,A2}	1.1NF 2.2NF 3.3NF 4.BCNF
714. (b)	What is the MINIMUM number of priority levels that a Generic Interrupt Controller (GIC) supports?	1.8 2.16 3.32 4.6
715. ----	What is the minimum subset of the super key that can be used to uniquely identify an entity in an entity set known as?	1. Candidate Key 2. Foreign Key

		3. Unique Key 4. Primary Key
716. (a)	What is the order of precedence in python? i) Parentheses ii) Exponential iii) Multiplication iv) Division v) Addition vi) Subtraction	1.i,ii,iii,iv,v,vi 2.ii,i,iii,iv,v,vi 3.ii,i,iv,iii,v,vi4.i,ii,iii,iv,vi,v
717. (b)	what is the output for the following function? LPAD(salary,10,'*')	1.10***24000 2.*****24000 3.24000***** 4.error
718. (b)	What is the output of below program? 1. def maximum(x, y): 2. if x > y: 3. return x 4. elif x == y: 5. return 'The numbers are equal' 6. else: 7. return y 8. 9. print(maximum(2, 3))	1.The numbers are equal 2.3 3.2 4.Error
719. (c)	What is the output of below program? 1. def say(message, times = 1): 2. print(message * times) 3. say('Hello') 4. say('World', 5)	1.Hello World 5 2.Hello World,World,World,World,World 3.Hello WorldWorldWorldWorldWorld 4.Hello HelloHelloHelloHelloHello

720. (b) 20	What is the output of following program?
	
	# include <stdio.h>
	void fun(int x)
	{
	  x = 30;
	}
	
	int main()
	{
	 int y = 20;
	 fun(y);
	 printf("%d", y);
	 return 0;
	}
		1.
		30
		2.
		20
		3.
		Compiler Error
		4.
		Runtime Error

721. (a)	What is the output of the below program ? 1. x = 50 2. def func(x): 3. print('x is', x) 4. x = 2 5. print('Changed local x to', x) 6. func(x) 7. print('x is now', x)	1.x is now 50 2.x is now 2 3.No output 4.x is now 100

722. (c)	What is the output of the below program? 1. def func(a, b=5, c=10): 2. print('a is', a, 'and b is', b, 'and c is', c) 3. 4. func(3, 7) 5. func(25, c = 24) 6. func(c = 50, a = 100)	1.a is 7 and b is 3 and c is 10 a is 25 and b is 5 and c is 24 a is 5 and b is 100 and c is 50 2.a is 3 and b is 7 and c is 10 a is 5 and b is 25 and c is 24 a is 50 and b is 100 and c is 5 3.a is 3 and b is 7 and c is 10 a is 25 and b is 5 and c is 24 a is 100 and b is 5 and c is 50 4.Error
723. (c)	What is the output of the below program? 1. def printMax(a, b): 2. if a > b: 3. print(a, 'is maximum') 4. elif a == b: 5. print(a, 'is equal to', b) 6. else: 7. print(b, 'is maximum') 8. printMax(3, 4)	1.3 2.4 3.4 is maximum 4.Error
724. (b)	What is the output of the below program? 1. x = 50 2. def func(): 3. global x 4. print('x is', x) 5. x = 2 6. print('Changed global x to', x) 7. func() 8. print('Value of x is', x)	1.x is 50 Changed global x to 2 Value of x is 50 2.x is 50 Changed global x to 2 Value of x is 2 3.x is 50 Changed global x to 50 Value of x is 50 4.Error
725. (c)	What is the output of the code shown below? if (9 < 0) and (0 < -9): print("hello") elif (9 > 0) or False: print("good") else: print("bad")	1.error 2.hello 3.good 4.bad
726. ---	What is the output of the code shown? import re print(re.ASCII)	1.256 2.32 3.64 4.8
727. (c) 4.57	What is the output of the expression? round(4.5676,2)	1.4.5 2.4.6 3.4.57 4.4.56

728. (b) Garbage value	What is the output of the following C++ program?
	
	#include<iostream>
	using namespace std;
	
	int main()
	{
	    union abc
	  {
	    int x;
	    char ch;
	}
	 var;
	 var.ch = 'A';
	 cout << var.x;
	 return 0;
		1.
		A
		2.
		Garbage Value
		3.
		65
		4.
		97

	}	
729. (c)	What is the output of the following code? def change(i = 1, j = 2): i = i + j j = j + 1 print(i, j) change(j = 1, i = 2)	1.1 2 2.3 3 3.3 2 4.Error
730. (a)	What is the output of the following code? def change(one, *two): print(type(two)) change(1,2,3,4)	1.Tuple 2.Dictionary 3.Integer 4.Error
731. (b) zzz	What is the output of the following code? def display(b, n): while n > 0: print(b,end="") n=n-1 display('z',3)	1.zz 2.zzz 3.infinite loop 4.Error
732. (a) zzz	What is the output of the following code? def display(b, n): while n > 0: print(b,end="") n=n-1 display('z',3)	1.zzz 2.zz 3.Error 4.Infinite loop
733. (b) 0	What is the output of the following code? i=0 def change(i): i=i+1 return i change(1) print(i)	1.1 2.0 3.Nothing is Displayed 4.Error

734. (c) Error	What is the output of the following code?
	
	>>> a={4,5,6}
	
	>>> b={2,8,6}
	
	>>> a+b
		1.
		{4,5,6,2,8}
		
		2.
		{4,5,6,2,8,6}
		
		3.
		Error as unsupported operand type for sets
		4.
		Error as the duplicate item 6 is present in both sets

735. (a) Error	What is the output of the following code?
	
	>>> a={4,5,6}
	
	>>> b={2,8,6}
	
	>>> a-b
		1.
		{4,5}
		
		2.
		{6}
		
		3.
		Error as unsupported operand type for set data type
		
		4.
		Error as the duplicate item 6 is present in both sets

736. (a) Error	What is the output of the following code?
	
	>>> s={5,6}
	
	>>> s*3
		1.
		Error as unsupported operand type for set data type
		2.
		{5,6,5,6,5,6}
		
		3.
		{5,6}
		
		4.
		Error as multiplication creates duplicate elements which isn't allowed

737. (d)	What is the output of the following code? a={1:"A",2:"B",3:"C"} print(a.get(5,4))	1. Error, invalid syntax 2. A 3. 5 4. 4
738. (a) 1 A 2 B 3 C	What is the output of the following code? a={1:"A",2:"B",3:"C"} for i,j in a.items(): print(i,j,end=" ")	1. 1 A 2 B 3 C 2. 1 2 3 3. A B C 4. 1:"A" 2:"B" 3:"C"
739. (c) 4	What is the output of the following code? nums = set([1,1,2,3,3,3,4,4]) print(len(nums))	1. 7 2. Error, invalid syntax for formation of set 3. 4 4. 8
740. (d) True	What is the output of the following function? any([2>8, 4>2, 1>2])	1.4>2 2.Error 3.False 4.True

741. (b) []	What is the output of the following function? re.findall("hello world", "hello", 1)	1.["hello"] 2.[ ] 3.hello 4.hello world

742. (b) True	What is the output of the following piece of code when executed in the python shell?
	
	>>> a={5,4}
	
	>>> b={1,2,4,5}
	
	>>> a<b
		1.
		{1,2}
		
		2.
		True
		
		3.
		False
		
		4.
		Invalid operation

743. (a)	What is the output of the following piece of code? #mod1 def change(a): b=[x*2 for x in a] print(b) #mod2 def change(a): b=[x*x for x in a] print(b) from mod1 import change from mod2 import change #main s=[1,2,3] change(s)	1.There is a name clash 2.[2,4,6] [1,4,9]. 3.[1,4,9]. 4.[2,4,6].
744. (c) 4	What is the output of the following piece of code? def a(b): b = b + [5] c = [1, 2, 3, 4] a(c) print(len(c))	1.Error 2.1 3.4 4.5
745. (c) Error	What is the output of the following piece of code? from math import factorial print(math.factorial(5))	1.Error, method factorial doesn't exist in math module 2.120 3.Error, the statement should be: print(factorial(5)) 4.Nothing is printed

746. (b) {3,4,5,6,7}	What is the output of the following piece of code?
	
	>>> a={3,4,5}
	
	>>> b={5,6,7}
	
	>>> a|b
		1.
		Invalid operation
		2.
		{3, 4, 5, 6, 7}
		
		3.
		{5}
		
		4.
		{3,4,6,7}

747. (a) True	What is the output of the following piece of code?
	
	>>> a={5,6,7,8}
	
	>>> b={7,5,6,8}
		1.
		True
		
		2.
		False

	>>> a==b	3. {5,6,7,8} 4.{7,8}

748. (d)
{5,6,10,11}
	What is the output of the following piece of code?
	
	>>> a={5,6,7,8}
	
	>>> b={7,8,10,11}
	
	>>> a^b
		1.
		{5,6,7,8,10,11}
		
		2.
		{7,8}
		
		3.
		Error as unsupported operand type of set data type
		
		4.
		{5,6,10,11}

749. (c) 5 5 6
7 7 7
	What is the output of the following piece of code?
	
	a = [5,5,6,7,7,7]
	
	b = set(a)
	
	def test(lst):
	
	  if lst in b:
	
	    return 1
	
	  else:
	
	    return 0
	
	for i in filter(test, a):
	
	  print(i,end=" ")
		1.
		5 5 6
		
		2.
		5 6 7
		
		3.
		5 5 6 7 7 7
		
		4.
		5 6 7 7 7

750. (b) A	What is the output of the following piece of code? a={1:"A",2:"B",3:"C"} print(a.get(1,4))	1. 1 2. A 3. 4 4. Invalid syntax for get method
751. (c) False	What is the output of the function shown below? all([2,4,0,6])	1.0 2.True 3.False 4.Error
752. (d) 5.0	What is the output of the function shown below? import math print(abs(math.sqrt(25)))	1.-5 2.5 3.Error 4.5.0

753. (b) False	What is the output of the functions shown below? min(max(False,-3,-4), 2,7)	1.2 2.False 3.-3 4.-4
754. (a)	What is the output of the line of code shown below? re.split('\W+', 'Hello, hello, hello.')	1.['Hello', 'hello', 'hello', ''] 2.['Hello', 'hello', 'hello.'] 3.['Hello, 'hello', 'hello'] 4.['Hello', 'hello', 'hello', '.']
755. (a) 40	What is the output? d = {"john":40, "peter":45} d["john"]	1. 40 2. 45 3. "john" 4. "peter"
756. (c)	What is the percentage of C , when the percentage of A is 20% in a dsDNA?	1.20% 2.40% 3.30% 4.80%

757. ---	What is the result of compiling and running the following code?
	
	 public class Test {
	
	    static int total = 10;
	
	    public static void main (String args []) {
	
	        new Test();
	
	    }
	
	    public Test () {
	
	        System.out.println("In test");
	
	        System.out.println(this);
	
	        int temp = this.total;
	
	        if (temp > 5) {
	
	           System.out.println(temp);
	
	        }
	
	    }
	
	}
		1.
		The class will not compile
		2.
		The compiler reports and error at line 2
		3.
		The value 10 is one of the elements printed to the standard out
		4.
		The compiler reports an error at line 9

758. (b) 2	What is the result of round(0.5) – round(-0.5)?	1.1 2.2 3.0 4.-1
759. ---	what is the shift taken during the normalization process in performing addition and subtraction using	1. arithmetic shift left 2. arithmetic shift right 3. circular shift left or

	floating point numbers?	right 4. logical shift left or right
760. ---	What is the shorthand way of putting margin on an object?	1.margin-right: 10px; margin-top: 5px;2.margin: 5px 10px 0 5px3.padding:10px; 4.margin-left:10px;
761. (d) current position	What is the use of tell() method in python?	1.Tells you the position in the folder 2.tells you the file is opened or not 3.tells you the end position within the file 4.tells you the current position within the file
762. (b)	What is the way of calling a function named "myFunc"?	1.call myFunc() 2.myFunc() 3.call function myFunc() 4.call function: myFunc()
763. (a) powerdown	What is the WFI instruction used for?	1.To power down the interrupt controller when it is not required 2.To signal an interrupt event to another processor in a multi-core system 3.To enable interrupts temporarily while in the middle of an exception handler 4.To place the processor in a low power mode while waiting for an interrupt
764. (d)	What process does the technical term normalization describe?	1. Creating tables from an ER diagram 2. Creating larger tables from smaller tables 3. Expressing a database's design in terms of set theory 4. Breaking larger tables into smaller tables
765. (d)	What selector do we use to set different properties for alternate rows in the table?	1.td:nth-child(odd){ } 2.table:nth-child(odd){ }3.th:nth-child(odd){ } 4.tr:nth-child(odd){ }
766. (c) 8	What should be output of below program? program is compiled on gcc compiler. #include<iostream> using namespace std; struct student{ char a; char b; int c; };	1. 4 2. 6 3. 8 4. 12

	int main()
	
	{
	
	 cout<<sizeof(student);
	
	 return 0;
	
	}	

767. (a)	What type of computer chips are volatile?	1. RAM chips 2. ROM chips 3.CDROM4.FLASH MEMORY
768. (b)	What type of relationship exists between Teacher table and Class table?	1. One to many 2. Many to many 3. One to one 4. Two to two
769. (c) 3,2,15	What will be the output of the program ? #include int main() { int a[5] = {5, 1, 15, 20, 25}; int i, j, m; i = ++a[1]; j = a[1]++; m = a[i++]; printf("%d, %d, %d", i, j, m); return 0; }	1.2, 1, 15 2.1, 2, 5 3.3, 2, 15 4.2, 3, 20
770. (a) []	What will be the output? d = {"john":40, "peter":45} print(list(d.keys()))	1. ["john", "peter"] 2. ["john":40, "peter":45] 3. ("john", "peter") 4. ("john":40, "peter":45)
771. (a) True	What will be the output? d = {"john":40, "peter":45} "john" in d	1. True 2. False 3. None 4. Error
772. (b) False	What will be the output? d1 = {"john":40, "peter":45} d2 = {"john":466, "peter":45} d1 > d2	1. True 2. False 3. Error 4. None

773. (b) False	What will be the output? d1 = {"john":40, "peter":45} d2 = {"john":466, "peter":45} d1 == d2	1. True 2. False 3. None 4. Error
774. (c)	What will be the sequence of the complementary strand for the following DNA sequence? 5' AGCTATTACG3'	1.5' TCGATAATGC3' 2.5'CGTAATAGCT3'3.3'AGCTATTACG5' 4.3'CGTAATAGCT3'
775. (b) Deadlock	What will happen if a non-recursive mutex is locked more than once ?	1.Starvation 2.Deadlock 3.Aging 4.Signaling
776. (d) All	When a new row is inserted the constraints that can be violated are	1.Primary Key constraint 2.Referential Integrity Constraint 3.Domain Constraint 4.All of these options
777. (c) First base class constructor is called	When an object is created to child class	1. Destructor is called 2. First child class constructor is called 3. First base class constructor is called 4. Both are called simultaneously
778. (b)	When building code for a processor without floating point hardware, how would the compiler deal with floating point calculations in the source code?	1.The compiler will produce code that results in calculations with less accuracy 2.The compiler will produce an error and not compile3.The compiler will use libraries to perform the floating point operations with integer instructions 4.The compiler will warn the programmer that the code needs to be rewritten using fixed point arithmetic
779. ---	When many users access mainframes, this approach is called as	1.resource allocation 2.word processors3.dedicated resources 4.interface
780. ---	When several processes access the same data concurrently and the outcome of the execution depends on the particular order in which the access takes place, is called	1.dynamic condition 2.race condition3.essential condition 4.critical condition
781. ---	When should a function be implemented as a template function?	1.When the data types of the parameters all have copy constructors 2.When the function

		depends on an underlying data type. 3.When the function only takes one argument 4.When the function is relatively short (usually just one line).
782. (a) 4	When the entries 7, 4, 6, 1, 2, 3, 8, 5 are successively inserted into an initially empty binary search tree, what is the height of the resulting tree?	1.4 2.3 3.7 4.2
783. (c) center	Where is the content in the box model?	1.The outside 2.The left 3.Center 4.Nowhere
784. (d) Register	Which addressing mode execute its instructions within CPU without the necessity of reference memory for operands?	1.Implied Mode 2.Immediate Mode 3.Direct Mode 4.Register Mode
785. (a) action	Which attribute is part of a 'form' tag	1.action 2.url 3.get 4.post
786. (c) Gantt	Which chart is a tool that depicts project as network diagram that is capable of graphically representing main events of project in both parallel and consecutive way?	1.Bar Chart 2.PERT Chart 3.Gantt Chart4.Pie Chart
787. (d) 2's complement	Which data representation is used by the booth's multiplication algorithm?	1.Sign-magnitude 2.Unsigned 3. One's complement 4.two's complement
788. (a) External	Which database level is closest to the users?	1.External 2.Internal 3.Physical 4.Conceptual
789. (a) next_day	Which date function is used to obtain the date of next Wednesday	1.NEXT_DAY 2.LAST_DAY 3.NEXT_DATE4.None
790. (a) Hit rate	Which factor determines the effectiveness of the cache?	1.Hit rate 2.Refresh cycle 3.Refresh rate4.Refresh time
791. (a) Timeout	Which function among the following lets to register a function to be invoked once?	1.setTimeout() 2.setTotaltime() 3.setInterval()4.setTime()
792. (c) Interval	Which function among the following lets to register a function to be invoked repeatedly after a certain time?	1.setTimeout() 2.setTotaltime() 3.setInterval()4.setTime()
793. (a) Pipeline	Which is a method of decomposing a sequential process into sub operations:	1.Pipeline 2.CISC 3.RISC 4.Database
794. (a)Baselines	Which is a software configuration management concept that helps us to control change without seriously impeding justifiable change?	1.Baselines 2.Source code 3.Data model4.E-R Model
795. (b) RISC	Which is a type of microprocessor that is designed with a limited number of instructions?	1.CPU 2.RISC 3.ALU 4.MUX
796. (a)	Which is a vector processor?	1.Subword parallelism 2.CISC 3.Superscalar4.VLIW

subword		
797. (a) Prospect	Which is an example of Homology & similarity tool?	1.PROSPECT 2.EMBOSS 3.RASMOL4.BLAST
798. (a) Mito	Which is known as power house of the cell?	1.Mitochondria 2.Lysosomes 3.Chloroplast4.Golgi complex
799. (c) Clustal W	Which is not a sequence alignment tool?	1.a. FASTA 2. b. BLAST 3.c. Clustal W 4. d. Pymol
800. (c) muscle contraction	Which is not true about actin filaments?	1.It is made up of actin 2.It is involved in vesicular transport 3.It is involved in muscle contraction 4.It helps in withstanding mechanical stress
801. (c) active	Which is not true about facilitated diffusion?	1.It is a down hill reaction 2.it requires carrier proteins 3.It is a type of active transport 4.It transports glucose molecules.
802. (c) ribosomes	Which is the site of protein synthesis?	1.Glyoxysomes 2.Endoplasmic reticulum3.Ribosomes 4.Golgi complex
803. (d) 2500	Which is the valid numerical literal in python _____.	1. 2,500 2. +2,500 3. +2,500.12 4. +2500.
804. (a) Flash memory	Which memory is erased electrically at the block level	1.Flash memory 2. PROM 3.EPROM 4. EEPROM
805. (c) clearInterval()	Which method receives the return value of setInterval() to cancel future invocations?	1.clearInvocation() 2.cancelInvocation()3.clearInterval() 4.Clear()
806. (a) app-com	Which model assumes that systems are created from reusable components, scripting or database programming?	1.An application-composition model 2.A post-architecture model 3.A usage model 4.An early design model
807. (c) singer-nicolson	Which model better explains the structure of membrane?	1.Watson- Crick model 2.David-Danielli model3.Singer-Nicolson model 4.Hardy-Weinberg model
808. (d) early-design	Which model is used during early stages of the system design after the requirements have been established?	1.An application-composition model 2.A post-architecture model 3.A reuse model 4.An early design model
809. (c) reuse	Which model is used to compute the effort required to integrate reusable components or program code that	1.An application-composition model 2.A post-architecture model

	is automatically generated by design or program translation tools?	3.A reuse model 4.An early design model
810. (a) dispatcher	Which module gives control of the CPU to the process selected by the short-term scheduler?	1.dispatcher 2. interrupt 3.scheduler 4. none of the mentioned
811. (c)	Which of the following algorithm design technique is used in the quick sort algorithm?	1.dynamic programming 2.backtracking3.divide and conquer 4.greedy method
812. (a) border	Which of the following box-sizing property value is described by width and height include content, padding, and borders?	1.border-box 2.content-box 3.margin-box4.padding-box
813. (b)	Which of the following cache has a separate comparator for each entry?	1.Direct mapped cache 2.Fully associative cache 3. 2-way associative cache 4.16-way associative cache
814. (a)	Which of the following cannot be a variable in Python?	1.__init__ 2.in 3.it 4.on
815. (a)	Which of the following class constructor will be invoked first?	1. Virtual base class 2.abstract class 3.base class 4.derived class
816. (b)	Which Of The Following Command Is Used To Open A File "C:\Temp.Txt" In Read-Mode Only?	1.infile = open("c:\temp.txt", "r") 2.infile = open("c:\\temp.txt", "r") 3.infile = open(file = "c:\temp.txt", "r+") 4.infile = open(file = "c:\\temp.txt", "r+")
817. (b)	Which Of The Following Command Is Used To Open A File "C:\Temp.Txt" In Write-Mode Only?	1.outfile = open("c:\temp.txt", "w") 2.outfile = open("c:\\temp.txt", "w") 3.outfile = open(file = "c:\temp.txt", "w+") 4.outfile = open(file = "c:\\temp.txt", "w+")
818. (b)	Which Of The Following Commands Can Be Used To Read The Entire Contents Of A File As A String Using The File Object ?	1.tmpfile.read(n) 2.tmpfile.read()3.tmpfile.readline() 4.tmpfile.readlines()
819. (b)	Which Of The Following Commands Can Be Used To Read The Next Line In A File Using The File Object ?	1.tmpfile.read(n) 2.tmpfile.readline()3.tmpfile.read() 4.tmpfile.readlines()
820. (a)	Which Of The Following Commands Can Be Used To Read "N" Number Of Characters From A File Using The File Object ?	1.file.read(n) 2.n = file.read() 3.file.readline(n)4.file.readlines()
821. (d) sorted	Which of the following constraint needs to be satisfied so as to perform binary search?	1.The list must contain only numbers 2.The list must contain odd number of elements3.The list must contain even number of elements 4.The list must be sorted.
822. (c) lunch	Which of the following costs is not part of the total effort cost?	1.Costs of networking and communications2.Costs of providing heating and lighting office

		space 3.Costs of lunch time food4.Costs of support staff
823. (c) inheritance	Which of the following describes"Is-a-Relationship" ?	1.Aggregation 2.Composition 3.Inheritance4.Dependency
824. (b) DFD	Which of the following diagram is not supported by UML considering Data-driven modeling ?	1.Activity Diagram 2.Data Flow Diagrams 3.State Chart Diagrams 4.Component Diagrams
825. (c) block transfer	Which of the following DMA transfer modes and interrupt handling mechanisms will enable the highest I/O band-width?	1.Transparent DMA and Polling interrupts2.Cycle-stealing and Vectored interrupts3.Block transfer and Vectored interrupts4.Block transfer and Polling interrupts
826. (a) Needleman algorithm	Which of the following dynamic programming to biological sequence comparison has Gap penalty?	1.a) Needleman Algorithm 2.Smith Algorithm 3.GOR algorithm 4.Chou-fasman algorithm
827. (c) reusability	Which of the following factors that is considered as an internal software quality _____	1. scalability 2.usability 3.reusability4.reliability
828. (d) initialize	Which of the following functions are performed by a constructor	1. Construct a new class 2. Construct a new object 3. Construct a new function 4. Initialize objects
829. (b) print	Which of the following functions is a built-in function in python?	1.seed( ) 2.print( ) 3.sqrt( ) 4.factorial( )
830. (c) &a	Which of the following gives the memory address of integer variable a?	1. *a; 2. a; 3. &a; 4. address(a);
831. (a) VLIW	Which of the following instructions supports parallel execution?	1.VLIW 2.TTA 3.ALU operation 4.Test-and-set instructions
832. (d) multicore	Which of the following is a combination of several processors on a single chip?	1.Vector architecture 2.RISC architecture3.CISC architecture 4.Multicore architecture
833. (b) KEGG	Which of the following is a metabolic pathway database?	1.EMBL 2.KEGG 3.ProDom 4.SCOP
834. (d) Dialign	Which of the following is a MSA tool?	1.Needle 2.Water 3.GOR I 4.Dialign

835. (d) All	Which of the following is a problem of file management system?	1.difficult to update 2.lack of data independence 3.data redundancy 4.all of the given options
836. (b)	Which of the following is a property of peer-to-peer systems?	1.Separate machines act as either the client of the server but not both. 2.Clients and servers are not distinguished from one another. 3.They do not offer any advantages over traditional client-server systems. 4.They suffer from the server acting as the bottleneck in performance.
837. (c)	Which of the following is a protein sequence database?	1.Genbank 2.EMBL 3.Prosite 4.DDBJ
838. (d)	Which of the following is a structural database?	1.Swiss prot 2.TrEMBL 3.MMDB 4. Genbank
839. (a)	Which of the following is a transaction?	1. A group of SQL statements consisting of one read and one write operation 2. A group of SQL statements consisting only of read operations 3. A group of SQL statements defining a user-oriented task 4. A group of SQL statements consisting only of write operations
840. (d) D-glucose	Which of the following is an aldohexose?	1.D-fructose 2.b) glyceraldehyde 3.c) dihydroxy acetone 4. d) D-glucose
841. (d)	Which of the following is correct about function overloading	1. Only the types of arguments are different 2. Only the order of argument is different 3. The number of argument is same 4. Both the types and order of the arguments are different
842. (a)	Which of the following is incorrect activity for the configuration management of a software system?	1.Internship management 2.Change management 3.Version management4.System management

843. (b)	Which of the following is more quickly accessed?	1.RAM 2.Cache memory 3.DRAM 4.SRAM
844. (b)	Which of the following is not a characteristic of a requirements document.	1.Concise 2.Ambiguous 3.Traceable 4.Verifiable
845. (a)	Which of the following is not a divide-and-conquer algorithm?	1.Kruskal's algorithm 2.Karatsuba's algorithm3.quicksort 4.mergesort
846. (b)	Which of the following is not a MSA tool?	1.MACAW 2.MEME 3.GOR I 4.DIALIGN
847. (d)	Which of the following is not a property of transactions?	1.Atomicity 2.Concurrency 3.Isolation4.Durability
848. (b)	Which of the following is not a Software Configuration Management Activity?	1.Configuration item identification 2.Risk management 3.Release management4.Branch management
849. (d)	Which of the following is not a translated BLAST?	1.blastx 2. b. tblastn 3.c. tblastx 4.d. None of the above
850. (b)	Which of the following is not a type of constructor	1. Copy constructor 2. Friend constructor 3. Default constructor 4. Parameterized constructor
851. (c)	Which of the following is NOT a valid deadlock prevention scheme?	1.Release all resources before requesting a new resource 2.Number the resources uniquely and never request a lower numbered resource than the last one requested. 3.Never request a resource after releasing any resource 4.Request and all required resources are allocated before execution
852. (d)	Which of the following is not an application of dequeue?	1. A-Steal job scheduling algorithm 2. Can be used as both stack and queue 3. To find the maximum of all sub-arrays of size k 4. Interrupt handling
853. (c)	Which of the following is not considered as a risk in project management?	1.Specification delays 2.Product competition3.Testing 4.Staff turnover

854. (c)	Which of the following is not part of Requirements Specification Document	1.Functional Requirement 2.Non Functional Requirement 3.Test Cases 4.Project Scope
855. (a)	Which of the following is not possible statically in C?	1.JaggedArray 2.RectangularArray3.CuboidalArray 4.Multidimensional Array
856. (d)	Which of the following is not project management goal?	1.Keeping overall costs within budget.2.Delivering the software to the customer at the agreed time. 3.Maintaining a happy and well-functioning development team.4.Avoiding costumer complaints.
857. (b)	Which of the following is not the member of class	1. Static function 2. Friend function 3. Const function 4. Virtual function
858. (b)	Which of the following is not the type of queue?	1. Ordinary queue 2. Single ended queue 3. Circular Queue 4. Priority Queue
859. (c)	Which of the following is not valid with reference to Message Passing Interface (MPI)?	1.MPI can run on any hardware platform2.The programming model is a distributed memory model 3.All parallelism is implicit4.MPI - Comm - Size returns the total number of MPI processes in specified communication
860. (c)	Which of the following is property of transactions	1. SAIF 2. DCIA 3. ACID 4. ACD
861. (a)	Which of the following is the first application of dynamic programming to biological sequence comparison?	1.a) Needleman Algorithm 2.Smith Algorithm 3.GOR algorithm 4.Chou-fasman

862. (c)	Which of the following is the highest isolation level in transaction management?	1.Committed Read 2.Repeated Read3.Serializable 4.Uncommitted Read
863. (a)	Which of the following is the process of assembling program components, data, and libraries, and then compiling and linking these to create an executable system?	1.System building 2.Release management 3.Change management4.Version management
864. (d)	Which of the following is the proper declaration of a pointer?	1. int x; 2. int &x; 3. ptr x; 4. int *x;
865. (b)	Which of the following is the understanding of software product limitations, learning system related problems or changes to be done in existing systems beforehand, identifying and addressing the impact of project on organization and personnel etc?	1.Software Design 2.System Analysis 3.Requirement Gathering 4.Testing
866. (c)	Which of the following is the use of function in python?	1.Functions don't provide better modularity for your application 2.You can't also create your own functions3.Functions are reusable pieces of programs 4.We can't have more than one user defined functions
867. (a)	Which of the following is true about inheritance in Java? 1) Private methods are final. 2) Protected members are accessible within a package and inherited classes outside the package. 3) Protected methods are final. 4) We cannot override private methods.	1. 1, 2 and 4 2. Only 1 and 2 3. 1, 2 and 3 4. 2, 3 and 4
868. (b)	Which of the following is true about nucleoside?	1.9th nitrogen atom of purine and 1st nitrogen atom of pyrimidine are connected to C1' of sugar molecule. 2.1st nitrogen atom of both purines and pyrimidines are connected to C1' of sugar molecule3.Nucleoside contains phosphate4.nucleoside is made up of only sugar

869. (a)	Which of the following is true with respect to Reference?	1.A reference can never be NULL 2.A reference needs an explicit dereferencing mechanism 3.A reference can be reassigned after it is established 4.A reference and pointer are synonymous
870. (c)	Which of the following is/are main parameters that you should use when computing the costs of a software development project?	1.Selecting the project 2.Closing the Project 3.Hardware , Software and effort costs interms of paying software engineers and managers. 4.Visiting Companies looking for any available projects to take it up.
871. (b)	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 4.An identifying relationship
872. (b) TLB	Which of the following need not necessarily be saved on a context switch between processes?	1.General purpose registers 2.Translation lookaside buffer (TLB) 3.Program counter4.All of the above
873. (b) TLB	Which of the following need not necessarily be saved on a context switch between processes?	1.General purpose registers 2.Translation look-aside buffer 3.Program counter 4.All of the above
874. (a) projector	Which of the following operation is used if we are interested in only certain columns of a table?	1.PROJECTION 2.SELECTION 3.UNION4.JOIN
875. (c) auto	Which of the following Overflow property value is described by scrollbars should be provided if the content is too big, but the actual implementation is left up to the browser?	1.visible 2.scroll 3.auto 4.hidden
876. (c) semi-permiability	Which of the following properties of the membrane help in transport of molecules?	1.Fluidity 2.Asymmetry 3.semi permeability4.both fluidity and assymmetry
877. (d) padding top	Which of the following property adds padding to the top of an element?	1.height 2.padding-height 3.top 4.padding-top
878. (a) overflow	Which of the following property controls the horizontal overflow of a block or inline block?	1.overflow-x 2.overflow 3.y-overflow 4.x-overflow
879. (d) PC	Which of the following register is used in the control unit of the CPU to indicate the next instruction which is to be executed?	1. Accumulator 2.Index register 3.Instruction decoder 4.Program counter
880. (d) join	Which of the following relational algebra operations do not require the participating tables to be union-compatible?	1. Union 2. Intersection 3. Difference

		4. Join
881. (d) join	Which of the following relational algebra operations do not require the participating tables to be union-compatible?	1.Union 2.Intersection 3.Difference 4.Join
882. (d) dish	Which of the following requires a device driver?	1.Register 2.Cache 3.Main memory 4.Disk
883. (b) FIFO	Which of the following scheduling algorithms is non-preemptive?	1.Round Robin 2.First-In First-Out3.Multilevel Queue Scheduling 4.Multilevel Queue Scheduling with Feedback
884. (c) heap sort	Which of the following sorting algorithms does not have quadratic-time worst-case performance to sort an array with n elements?	1.insertion sort 2.selection sort 3.heap sort4.quick sort
885. (d) merge sort	Which of the following sorting algorithms has worst case time complexity O(n log n)?	1.insertion sort 2.selection sort 3.bubble sort4.merge sort
886. (a)	Which of the following statement is correct	1. A constructor is called at the time of declaration of an object 2. A constructor is called at the time of use of an object 3. A constructor is called at the time of declaration of a class 4.A constructor is called at the time of use of a class
887. (d)	Which of the following statement is true regarding the opening modes of a file?	1.When you open a file for reading, if the file does not exist, no error occurs 2.When you open a file for writing, if the file does not exist, an error occurs 3.When you open a file for reading, if the file does not exist, the program will open an empty file 4.When you open a file for writing, if the file exists, the existing file is overwritten with the new file.
888. (b)	Which of the following statements are correct about 6 used in the program? int num[6]; num[6]=21;	1.In the first statement 6 specifies a particular element, whereas in the second statement it specifies a type. 2.In the first statement 6 specifies a array size, whereas in the second statement it specifies a particular element of array. 3.In the first statement 6 specifies a particular element, whereas in the second

		statement it specifies a array size. 4.In both the statement 6 specifies array size.
889. (c)	Which of the following statements are true?	1. Database must contain two or more tables 2. Database must contain two data tables 3. Database must contain at least one data table 4. Database must contain one data table
890. (d)	Which of the following statements contains an error?	1. Select * from emp where empid = 10003; 2. Select empid from emp where empid = 10006; 3. Select empid from emp; 4. Select empid where empid = 1009 and lastname = 'GELLER';
891. (d)	Which of the following statements is incorrect for Parallel Virtual Machine (PVM)?	1.The PVM Communication model provides asynchronous blocking send, asynchronous blocking receive and non-blocking receive function 2.Message buffers are allocated dynamically 3.The PVM communication model assumes that any task that can send a message to any other PVM task and that there is no limit to the size or number of such messages 4.In PVM Model, the message order is not preserved
892. (c)	Which of the following statements is not true?	1.MPI_Isend and MPI_Irecv are non-blocking message passing routines of MPI2.MPI_Issend and MPI_Ibsend are non-blocking message passing routines of MPI3.MPI_Send and MPI_Recv are non-blocking message passing routines of MPI4.MPI_Ssend and MPI_Bsend are blocking message passing routines

		of MPI
893. (b)	Which of the following statements is true about the O( ) asymptotic notation?	1.100n+6=O(1) 2.33=O(1) 3.n!=O(n^2)4.2^n=O(n^3)
894. (b)	Which of the following statements is true?	1.Recursion is always better than iteration2.Recursion uses more memory compared to iteration 3.Recursion uses less memory compared to iteration 4.Iteration is always better and simpler than recursion
895. (d)	Which of the following system represents -0 as 1111 in memory?	1.unsigned integers 2.one's complement3.sign-magnitude 4.two's complement
896. (b) hidden	Which of the following visibility property value is described by the element is not visible, but the layout of surrounding elements is not affected?	1.visible 2.hidden 3.collapse 4.border
897. (a) ph	Which of the operator is used to test if a particular property exists or not?	1.in 2.exist 3.within 4.exists
898. (c)	Which of these has the largest asymptotic growth rate?	1.100*n 2.12*n^3 + 34*n 3.2*n^4 4.31922
899. (b)	Which of these keywords is used to refer to member of base class from a subclass?	1. upper 2. super 3. this 4. none of the mentioned
900. (b)	Which one is correct about Watson-Crick model of DNA?	1.Sugar and phosphate found in the centre and nitrogenous bases in the periphery of the helix 2.Nitrogenous bases in the centre and sugar and phosphate in the centre of the helix 3.Sugar in the centre and bases and phosphate in the periphery of the helix 4.All the components in the centre of the helix
901. (c)	Which one of the following amino acid is a basic amino acid?	1.Leucine 2.Iso leucine 3.lysine 4.glutamine
902. (c)	Which one of the following aminoacid can act as a buffer at physilogical pH?	1.Arginine 2.Lysine 3.Histidine 4.Leucine
903. (d)	Which one of the following aminoacid has indole group ?	1.Tyrosine 2.Histidine 3.Arginine4.Tryptophan
904. (a)	Which one of the following aminoacid is not an	1.Tyrosine 2.Histidine 3.Phenyl

	aromatic aminoacid?	alanine4.Tryptophan
905. (b)	Which one of the following biomolecule can act as an ampholyte?	1.sugar 2.aminoacid 3.lipid 4.nucleotide
906. (d)	Which one of the following bonds are not involved in the stabilization of B DNA?	1.Hydrogen bonding 2.Van der Waal's interactions 3.Phospho diester bond 4.Ionic bond
907. (d)	Which one of the following error will be handle by the operating system?	1.power failure 2.lack of paper in printer 3. connection failure in the network 4.all of the mentioned
908. (d)	Which one of the following fatty acid contains 4 double bonds?	1.oleic acid 2.Linoleic acid 3.Linolenic acid4.Arachidonic acid
909. (a)	Which one of the following feature distinguishes prokaryotic cells from eukaryotic cells?	1.Absence of membrane bound organelles2.Ribosomes 3.Cytoplasm 4.Cell wall
910. (d)	Which one of the following is a polyunsaturated fatty acid?	1.Palmitic acid 2.stearic acid 3.Oleic acid4.Arachidonic acid
911. (c)	Which one of the following is a sulphur containing aminoacid?	1.arginine 2.glutamine 3.cysteine 4.lysine
912. (d) heparin	Which one of the following is not a homopolysaccharide?	1.Chitin 2.Glycogen 3.cellulose 4.heparin
913. (b)	Which one of the following is true about glycogen?	1.It does not have any branches 2.It contains many non-reducing ends and one reducing end. 3.It is a plant starch 4.It is made up of amylose and amylopectin.
914. (c)	Which one of the following is a sequence alignment tool provided by NCBI?	1.FASTA 2.Chime 3.BLAST 4.Clustal W
915. (c)	Which one of the following is a synchronization tool?	1.thread 2.pipe 3.semaphore 4.socket
916. (a)	Which one of the following is a visual (mathematical) way to determine the deadlock occurrence?	1.starvation graph 2.resource allocation graph 3.inversion graph 4.none of the mentioned
917. (d)	Which one of the following is involved in electron transport chain in prokaryotes?	1.Mesosomes 2.Mitochondria 3.Lysosomes4.Ribosomes
918. (c)	Which one of the following is known as suicidal bags?	1.mitochondria 2.peroxisomes 3.lysosomes4.glyoxysomes
919. (c)	Which one of the following is not a compound lipid?	1.Wax 2.phospholipid 3.ether lipid4.sulpholipid
920. (c) phosphodiester bond	Which one of the following is not a covalent bond?	1.peptide bond 2.glycosidic bond3.phosphodiester bond 4.hydrogen bond
921. (c)	Which one of the following is not a cytoskeletal	1.Intermediate filament 2.Thin filament3.Thick filament

	element?	4.Microtubule
922. (d)	Which one of the following is not a fibrous protein?	1.Keratin 2.silk fibroin 3.collagen 4.ribozyme
923. (a)	Which one of the following is not a fundamental activity for software processes in software design & Engineering?	1.Software Verification 2.Software design and implementation 3.Software evolution4.Software Requirement specification
924. (b)	Which one of the following is not a heuristic method of sequence alignment?	1.FASTA 2.PSI-BLAST 3.BLAST 4.None of the above
925. (d) deadlock freedom	Which one of the following is NOT a part of the ACID properties of database transactions?	1.Atomicity 2.Consistency 3.Isolation4.Deadlock-freedom
926. (d)	Which one of the following is not a pentose?	1.Ribose 2.Deoxyribose 3.Xylose 4.Erythrose
927. (c)	Which one of the following is not a phospholipid?	1.Lecithin 2.cephalin 3.cerebroside4.Sphingomyelin
928. (d)	Which one of the following is not an essential fatty acid?	1.Oleic acid 2.linoleic acid 3.linolenic acid4.arachidonic acid
929. (c)	Which one of the following is not attributes of file	1.closed 2.softspace 3.rename 4.mode
930. (d)	Which one of the following is not the function of microtubules?	1.Formation of cilia and flagella 2.Positioning of the organelles 3.Formation of spindle fibres 4.phagocytosis
931. (a)	Which one of the following is not true about beta sheets?	1. They are rich in glycine and alanine2.They have more number of hydrophobic interactions 3.They belong to secondary structure of proteins 4.The structure is stabilized by intra hydrogen bonding
932. (c) keto enol	Which one of the following is tautomerism?	1.Keto- enol 2.cis-trans 3.D and L 4.Alpha and beta
933. (c)	Which one of the following is the address generated by CPU?	1.physical address 2.absolute address3.logical address 4.none of the mentioned
934. (b)	Which one of the following is the tightest upper bound that represents the number of swaps required to sort n numbers using selection sort?	1.O(log n) 2.O(n) 3.O(n log n) 4.O(n^2)
935. (c) both	Which one of the following is true for a CPU having a single interrupt request line and a single interrupt grant line?	1.Neither vectored interrupt nor multiple interrupting devices are possible. 2.Vectored interrupts are not possible but multiple interrupting devices are possible. 3.Vectored interrupts and multiple

		interrupting devices are both possible. 4.Vectored interrupt is possible but multiple interrupting devices are not possible.
936. (d)	Which one of the following models is not suitable for accommodating any change?	1.Spiral Model 2.Prototyping Model 3.RAD Model 4.Waterfall Model
937. (b)	Which one of the following organelle is found only in plant cells?	1.Mitochondria 2.Chloroplast 3.Ribosomes4.Endoplasmic reticulum
938. (d)	Which one of the following protein is oligomeric?	1.Myoglobin 2.Hemoglobin 3.Ribonuclease4.Lysozyme
939. (c)	WhIch one of the following RNA brings aminoacid to the site of protein synthesis?	1.Ribosomal RNA 2.Messenger RNA3.Transfer RNA 4.Micro RNA
940. (c)	Which one of the following statements is not correct?	1.A destructor is not inherited. 2.A constructor can not be called explicitly. 3.A constructor is not inherited. 4.A destructor can be called explicitly.
941. ---	Which one of the following transport uses chemical gradient ?	1.Symport 2.pump 3.uniporter 4.diffusion
942. (c)	Which one of the nucleotide is known as energy currency of the cell?	1.GTP 2.CTP 3.ATP 4.TTP
943. (b)	Which one of these is floor division in python?	1./ 2.// 3.% 4.*/
944. (d)	Which phase of the RUP is used to establish a business case for the system ?	1.Transition 2.Construction 3.Elaboration4.Inception
945. (a)	Which process can be affected by other processes executing in the system?	1.Cooperating process 2.Child process3.Parent process 4. init process
946. (a)	Which processor is a peripheral device attached to a computer so that the performance of a computer can be improved for numerical computations:	1.Attached array processor 2.SIMD array processor 3.MIMD array processor 4.MISD array processor
947. (c)	Which property of the rapid prototype is not important?	1.The speed with which it can be developed2.The speed with which it can be modified 3.Its ability to determine the client's real needs4.The insights that the design team can gain from it, even if they are of the 'how not to do it' variety
948. (d)	Which pseudo selector matches every element that is the first child, of a particular type, of its parent.	1. :first-last-child 2. :first-of-type 3. :middle-of-type 4. :first-child
949. (b)	Which relational algebra query will return employees (i.e., EmpID) who work on all projects?	1.EmpID(Works) U EmpID(Employee)2.EmpID,ProjID(Works) %

		ProjID(Project)3.EmpID(Works) n EmpID(Employee) 4.none of the options
950. (b)	Which standard defines the most commonly encountered floating point representation.	1. IEEE 801 2. IEEE 754 3. IEEE 745 4.IEEE 547
951. (d)	Which technique was introduced because a single job could not keep both the CPU and the I/O devices busy?	1.Time-sharing 2.SPOOLing 3.Preemptive scheduling 4. Multiprogramming
952. (d)	Which types of register holds a single vector containing at least two read ports and one write ports:	1.Data system 2.Data base 3.Memory4.Vector register
953. (b)	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	1.45 2.67 3.34 4.78
954. (b)	Why is Requirements Management Important ? It is due to the changes _____	1.not happened in the environment 2.in technology 3.not in customer's expectations4.not happening in the software industry
955. (a)	With regard to Evolutionary development, identify the correct statement.	1.Evolutionary development usually comes in two flavors; exploratory development, and throw-away prototyping 2.Very large projects are natural candidates for an evolutionary development based approach 3.Exploratory development is used in situations where most of the requirements are well understood in advance 4.One of the strong points of evolutionary development is that it facilitates easy project management, through the high volume of documentation it generates
956. (b)	Work that continues throughout the project and does not relate to any specific phase of software development is termed a(n) _____	1.Milestone 2.Project function 3.Activity4.Task
957. (b) False	X->Y, XY->Z infers X->Z	1.True 2.False 3.Some times true 4.cant say
958. (b)	You can redirect the webpage in JavaScript by using ……………….. method.	1.window. reload 2.window.location3.page.location 4.url.newlocation
959. (b)	You can refresh the webpage in JavaScript by using ……………. method.	1.window.reload 2.location. reload 3.window. refresh 4.page.refresh

960. (c)	You want subclasses in any package to have access to members of a superclass. Which is the most restrictive access that accomplishes this objective?	1. public 2. private 3. protected 4. transient
961. (d)	You want to create a table that looks like: 12 -9 8 7 14 -32 -1 0 Which of the following will work?	1. double[][] table = { 12, -9, 8, 7, 14, -32, -1, 0} ; 2. double[][] table = {{12, -9, 8}, {7, 14, 0}, -32, -1, 0}}; 3. double[][] table = {{12, -9, 8} {7, 14} {-32, -1, 0}}; 4. double[][] table = {{12, -9, 8}, {7, 14}, {-32, -1, 0}};
962. (c)	zwitter ions can act as a/ an	1.acid 2.base 3.both acid and base 4.salt
963. (b)	'AS' clause is used in SQL for	1. Selection operation 2. Rename operation 3. Join operation 4. Projection operation
964. (b)	………… protocol grantees that a set of transactions becomes serializable.	1.two phase commit 2.two phase locking3.transaction locking 4.checkpoints
965. (c)	…………………. is a built – in JavaScript function which can be used to execute another function after a given time interval.	1.Timeout( ) 2.TimeInterval( ) 3.setTimeout ( )4.setTimeInterval ( )