QUESTION PAPER - 2014

COMPUTER SCIENCE & ENGINEERING

Q.1 _____ uses commands and responses of transfer message between an MTA client and an MTA server.

    (1) POP3   (2) SMTP   (3) HTTP   (4) FTP

Q.2 In HTTP v1.1, which request type is used to echo the incoming request

    (1) GET   (2) POST   (3) PUT   (4) TRACE

Q.3 _____ is the client/server application that allows a user to lon on to a remote machine, giving the user access to the remote system.

    (1) HTTP   (2) POST   (3) TELNET   (4) MIME

Q.4 Which LAN topology is easy to install but difficult in reconnection and fault isolation

    (1) STAR   (2) BUS   (3) RING   (4) MESH

Q.5 Which one of the following is not a Real time operating system ?

    (1) VxWorks   (2) Windows CE   (3) RTLinux   (3) Palm OS

Q.6 To access the services of operating system, the interface is provided by the

    (1) System calls   (2) API

    (3) Library   (4) Assembly instructions

Q.7 What is a long - term scheduler ?

    (1) It selects which process has to be brought into the ready queue

    (2) It selects which process has to be executed next and allocates CPU

    (3) It selects which process to remove from memory by swapping.

    (4) It selects which process has to be brought into the Blocked process

Q.8 Time quantum is define in

    (1) Shortest job scheduling algorithm

    (2) Round robin scheduling algorithm

    (3) Priority scheduling algcrithm

    (4) Multilevel queue scheduling algorithm

Q.9 The strategy of making processes that are logically runnable to be temporarily suspended is called

    (1) Non preemptive scheduling   (2) Preemptive scheduling

    (3) Shortest job first   (4) First come first served

Q.10 The most optimal scheduling algorithm is

    (1) FCFS - First Come First Served   (2) SJF - Shortest Job First

    (3) RR - Round Robin   (4) LCFS - Last Come First Serve

Q.11 Consider the following set of processes, the length of the CPU burst time given in milliseconds :

Process	Burst time
P1	6
P2	8
P3	7
P4	3

Assuming the above process being scheduled with the SJF scheduling algorithm:

(1) The waiting time for process P1 is 3ms

(2) The waiting time for process P1 is 0ms

(3) The waiting time for process P1 is 16ms

(4) The waiting time for process P1 is 9ms

Q.12 Which one of the following is the deadlock avoidance algorithm ?

(1) Ranker's algorithm   (2) Round-robin algorithm

(3) Elevator algorithm   (4) Kam's algorithm

Q.13 In fixed sized partition, the degree of multiprogramming is bounded by --

(1) The numbr of partitions   (2) The CPU utilization

(3) The memory size   (4) BOIS

Q.14 A process refers to 5 pages, A, B, C, D, E. If the page replacement algorithm is FIFO, the number of page transfers with an empty internal store of 3 frames is:

(1) 8   (2) 10   (3) 9   (4) 7

Q.15 Consider a disk queue with requests for I/O blocks on cylinders :

98, 183, 37, 122, 14, 124, 65, 67 Considering FCFS (First cum first served) scheduling, the total number of head movements is, if the disk head is initially at 53 :

(1) 600   (2) 620   (3) 630   (4) 640

Q.16 On systems where there are multiple operating system, the decision to load a particular one is done by :

(1) Boot loader   (2) Boot strap

(3) Process control block   (4) File control block

Q.17 Which of the following command is used to give permission of operation to other users in Database.

(1) Permission   (2) Allow   (3) Grant   (4) Revoke

Q.18 All of the following are types of databases, except :

(1) Relational   (2) Relational oriented

(3) Object oriented   (4) Multidimensional

Q.19 Which of the following is not a DML statement ?

(1) UPDATE   (2) COMMIT   (3) INSERT   (4) DELETE

Q.20 In the architecture of a database system, external level is the

(1) Physical level   (2) Logical level

(3) Conceptual level   (4) View level

Q.21 The column of a table is referred to as the

(1) Tuple   (2) Attribute   (3) Entity   (4) Degree

Q.22 A primary key for an entity is

(1) A candidate key   (2) An attribute

(3) A unique attribute   (4) A super key

Q.23 Operator is used to compare a value to a list of literals value that have been specified

(1) BETWEEN   (2) ANY   (3) IN   (4) ALL

Q.24 In E-R Diagram relationship type is represented by

(1) Ellipse   (2) Dashed ellipse   (3) Rectangle   (4) Diamond

Q.25 A relation in which the intersection of each row and column contains one and only one value is said to be in

(1) First normal form   (2) Second normal form

(3) Third normal form   (4) Fourth normal form

Q.26 Two phase protocol in a database management is

(1) A concurrency mechanism that is not deadlock free

(2) A recovery protocol used for restoring a database after a crash

(3) Any update to the system log done in two phases

(4) Not effective in database

Q.27 Which of the following is not a type of constructor ?

(1) Copy constructor   (2) Friend constructor

(3) Default constructor   (4) Parameterized constructor

Q.28 Which of the following concepts says, method invoking at runtime ?

(1) Data hiding   (2) Dynamic Typing

(3) Dynamic binding   (4) Dynamic loading

Q.29 Which one of the following are standard stream objects

(1) PIPE   (2) SYS   (3) ERROR   (4) BUFF

Q.30 How many objects can be created from an abstract class ?

(1) Zero   (2) One   (3) Two

Q.31 Which of the following will be called when an object goes out of scope ?

(1) Constructor   (2) Destructor   (3) Main   (4) Virtual function

Q.32 Which of the follwing function/type of function cannot be overloaded ?>

(1) Member function   (2) Static function

(3) Virtual function   (4) Operator function.

Q.33 Which of the following statement is correct ?

(1) Two functions having same number of argument, order and type of argument can be overloaded if both functions do not have any default argument.

(2) Overloaded function must have default arguments.

(3) Overloaded function must have default arguments starting from the left of argument list.

(4) A function can be over loaded more than once.

Q.34 The operator that cannot be overloaded is :

(1) ++   (2) ( )   (3) : :   (4) ~

Q.35 If you create a file by 'fstream', then the default mode of the file is :

(1) iso :: aap   (2) iso :: out

(3) iso :: app & ios :: out   (4) iso :: in & ios :: out

Q.36 When you derive a class privately, a protected base class member becomes

(1) Private   (2) Public   (3) Non inherited   (4) Protected

Q.37 Which will legally declare, construct, and initialize an array ?

(1) int [] my List = {"1", "2", "3"};   (2) int [] my List = (5, 8, 2);

(3) int my List [] [] = {4, 9, 7, 0};   (4) int my List [] = {4, 3, 7}

Q.38 Which two are valid constructors for thread in JAVA ?

(a) Thread (Runnable r, string name)   (b) Thread ( )

(c) Thread (int priority)   (d) Thread (Runnable r, string name)

(1) (a) & (c)   (2) (b) & (d)   (3) (a) & (b)   (4) (c) & (d)

Q.39 Which is TRUE about a method - local inner class

(1) it must be marked final   (2) it can be marked abstract

(3) it can be marked public   (4) it can be marked static

Q.40 What will be the output of the program ?

```
try
{
int x = 0;
int y = 5/x;
}
catch (Exception e)
{
    System.out.println ("Exception");
}
catch (Arithmetic Exception ae)
{
    System.out.println ("Arithmetic Exception");
}
System.out.println ("finished");
```

(1) Finished   (2) Exception

(3) Compilation fails   (4) Arithmetic Exception

Q.41 Given a class name as 'Student', which of the following is a valid constructor declaration for the class ?

(1) Student (student s) {}   (2) Student student () {}

(3) Private final student () {}   (4) Void student () {}

Q.42 Which of the keyword is used to define packages in Java ?

(1) pkg   (2) Pkg   (3) package   (4) Package

Q.43 Which of the access specifier can be used as an interface ?

(1) Public   (2) Protected   (3) Private   (4) Default

Q.44 What is multithreaded programming ?

(1) It's a process in which two different processes run simultaneously.

(2) It's process in which two or more parts of same process run simultaneously.

(3) It's a process in which many different processes are able to access same information.

(4) It's a process in which a single process can access information from many sources.

Q.45 Which of these keywords is not part of exception handling ?

(1) try   (2) finally   (3) thrown   (4) catch

Q.46 Which of these methods can be used to output a string in a applet ?

(1) display ( )   (2) print ( )   (3) drawstring ( )   (4) transient ( )

Q.47 Html document must always be saved with :

(1) .html   (2) .txt   (3) .doc   (4) .pdf

Q.48 To insert blank lines, which tags are used :

(1) <p>   (2) <bk>   (3)
     (4) <ba>

Q.49 HTML stands for,

(1) Hyper text marker language   (2) Hyper tab marker language

(3) High transfer markup language   (4) Hyper text markup language

Q.50 The schedular which determines when processes are to be suspended and resumed.

(1) Short-term schedular   (2) Long-term schedular

(3) Medium-term schedular   (4) Job schedular

Q.51 Which of the following is not a disk scheduling algorithm

(1) SSTF   (2) C-SCAN   (3) SRTF   (4) LOOK

Q.52 In VB Script functions, which one is false among the following

(1) Variables must be declared before use

(2) Variables may not be declared before use

(3) Variables may be declared without data type

(4) Variables are used in VB script

Q.53 A running program requests the services from the kernel of the operating system using a

_____ .

(1) System call   (2) Function call   (3) Procedure call (4) Remote call

Q.54 The leading bits of an IP address of a class B network are _____ .

(1) 10   (2) 01   (3) 110   (4) 0

Q.55 _____ tab enables you to view the current value of any variable or VB Script expression.

(1) Watch   (2) View   (3) Locate   (4) Current

Q.56 What does ASP stands for ?

(1) All Standard Pages   (2) Active Server Pages

(3) Active Standard Pages   (4) A Server Page

Q.57 Convert the fractional decimal number 6.75 to binary

(1) 0111.1100   (2) 0110.1010   (3) 0110.1100   (4) 0110.0110

Q.58 If a 3-input AND gate has eight input possibilities, how may of those possibilities will result in a HIGH output ?

(1) 1   (2) 2   (3) 7   (4) 8

Q.59 One advantage TTL has over CMOS is that TTL is _____.

(1) Less expensive   (2) Not sensitive to electrostatic discharge

(2) Faster   (4) More widely available

Q.60 Applying DeMorgan's theorem to the expression $\overline{ABC}$ we get _____.

(1) $\bar{A} + \bar{B} + \bar{C}$ (2) $\overline{A+B+C}$ (3) $A + \bar{B} + C\bar{C}$ (4) $A(B+C)$

Q.61 Which statement below best describes a Karnaugh map ?

(1) A Karnaugh map can be used to replace Boolean rules

(2) The Karnaugh map eliminates the need for using NAND and NOR

(3) Variable complements can be eliminated by using Karnaugh maps

(4) Karnaugh maps provide a cookbook approach to simplifying Boolean expressions.

Q.62 How is a J-K flip-flop made to toogle ?

(1) $J = 0, K = 0$ (2) $J = 1, K = 0$ (3) $J = 0, K = 1$ (4) $J = 1, K = 1$

Q.63 How many flip-flops are required to make a MOD-32 binary counter ?

(1) 3   (2) 32   (3) 5   (4) 6

Q.64 Which gate is best used as a basic comparator ?

(1) NOR   (2) OR   (3) Exclusive-OR   (4) AND

Q.65 Which segment register of 8086 is used for addressing a memory location in the code segment of the memory, where the executable program is stored.

(1) Code segment register   (2) Data segment register

(3) Extra segment register   (4) Stack segment register

Q.66 The 8086 _____ register contents indicate the results of computation in the ALU.

(1) Data Segment   (2) Flag   (3) Index   (4) Accumulator

Q.67 The 8086 _____ along with _____ forms a pipeline.

(1) Bus Interface Unit, Arithmetic and Logic Unit.

(2) Execution Unit, Arithmetic and Logic unit

(3) Bus Interface Unit, Memory unit

(4) Bus Interface unit, Execution unit.

Q.68 If this flag is set, the maskable interrupts are recognized by the CPU, otherwise they are ignored. What is that flag in 8086 ?

(1) Trap   (2) Interrupt   (3) Directional   (4) Overflow

Q.69 For the following instruction, what is the effective addresses : MOVAX, [BX] [SI]

(1) 10H*DS+[SI]   (2) 10H*DS+[BX]*[SI]

(3) 10H*DS+[BX]*[SI]   (4) 10H*[BX]+[SI]

Q.70 Which instruction of 8086, is used for finding out the codes in case of code conversion problems, using loop up table techniques ?

(1) TEST   (2) DAS   (3) CBW   (4) XLAT

Q.71 The conditional branch instruction used to transfer execution to the address 'label', if ZF = 1 or neither SF not OF is 1, is _____

(1) JNL/JGE label (2) JLE/JNC label   (3) JL/JNGE label (4) JNLE/JE label

Q.72 The 80286 CPU is able to address _____ MB of physical memory.

(1) 16   (2) 24   (3) 32   (4) 8

Q.73 The size of address but of 80386 is _____ bit.

(1) 16   (2) 24   (3) 32   (4) 64

Q.74 The 80486 is packaged in a _____ grid array package.

(1) 32-pin   (2) 48-pin   (3) 64-pin   (4) 168-pin

Q.75 Which of the following is a sequential access device

(1) Hard disk   (2) Optical disk   (3) Tape   (4) Flash memory

Q.76 The addressing mode in which the operand is given explicity in the instruction it self is

(1) Absolute mode   (2) Index mode

(3) Register direct mode   (4) Immediate mode

Q.77 Which of the following interrupt is non maskable

(1) INTR   (2) RST 7.5   (3) RST 6.5   (4) TRAP

Q.78 Speed of microprocessor depends on

(1) Data Bus width   (2) Access Time

(3) Response Time   (4) Hard disk

Q.79 Zero address instruction format is used for

(1) RISC architecture   (2) CISC architecture

(3) Von-Neuman architecture   (4) Stack-organized architecture

Q.80 The two types of main memory are

(1) Primary and secondary   (2) Random and sequential

(3) ROM and RAM   (4) Central and peripheral

Q.81 How many address lines are needed to address each memory locations in a 2048 X 4 memory chip ?

(1) 10   (2) 11   (3) 8   (4) 12

Q.82 CISC stands for

(1) Co-related Instructgion Set Computer   (2) Combined Instruction Set Computer

(3) Complex Instruction Set Computer   (4) Common Instruction Set Computer

Q.83 Fastest type of memory from the following hst is

(1) Tape   (2) Semiconductor   (3) Disk   (4) Bubble memory

Q.84 The entity that is not involved in a memory write operation.

(1) MAR   (2) Data Bus   (3) PC   (4) MDR

Q.85 What is the output of this C code

```
# include <stdio.h>
void main ( )
{
int a = - 5;
Int k = (1++, ++a);
printf ("%d/n",k);
}
```

(1) −3   (2) −5   (3) 4   (4) Undefined

Q.86 What is the output of this C code

```
#include <stdio.h>
int main ( )
{
int x = 2;
x = x << 1;
print f ("%d/n", x);
}
```

(1) 4

(2) 1

(3) Depends on the compiler

(4) Depends on the endianness of the machine

Q.87 What is the output of this 'C' code ?

```
# include <stdio.h>
void main ( )
{
int x = 4, y, z;
y = -x;
z = x-;
printf ("%d%d%d", x, y, z);
}
```

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

Q.88 Number of internal nodes in a full binary tree of height k is

(1) 2^{k-1} (2) 2^k-1 (3) 2^k (4) 2^k+1

Q.89 What is the output of this 'C' code ?

```c
#include <stdio.h>
void main ( )
{
char*s = "hello";
char*p = s;
printf ("%c\t%c", *(p+3), s[1]);
}
```

(1) h e   (2) l l   (3) l o   (3) l e

Q.90 What is the correct syntax to declare a function foo() which receives an array of structure in a function ?

(1) void foo (struct*var);   (2) void foo (struct*var[]);

(3) void foo (struct var);   (4) None of the mentioned

Q.91 Thedata structure which is called as one ended.

(1) queue   (2) stack   (3) tree   (4) graph

Q.92 A linear list in which each node has pointers to point to the predecessor and successors nodes is called as _____

(1) Singly Linked List   (2) Circular Linked List

(3) Doubly Linked List   (4) Linear Linked List

Q.93 Perorder is same as

(1) Depth-first order   (2) Breadth-first order

(3) Topological order   (4) Linear order

Q.94 The complexity of merge sort algorithm is

(1) O(n)   (2) O(log n)   (3) O(n2)   (4) O(n log n)

Q.95 Which layers of the OSI Reference model offers format and code conversion services

(1) Physical layer   (2) Network layer   (3) Session layer   (4) Presentation layer

Q.96 The most common UTP connector is

(1) BNC   (2) RJ-45   (3) SC   (4) MT-RJ

Q.97 To which class of IP addresses the following address corresponds to
11000001   10000011   00011011   11111111

(1) Class A   (2) Class B   (3) Class C   (4) Class D

Q.98 A block of IP addresses is granted to a small organization. We know that one of the addresses is 205.16.37.39/28. What are the first and last addresses in the block ?

(1) 205.16.37.39 and 205.16.37.47   (2) 205.16.37.32 and 205.16.37.47

(3) 205.16.37.32 and 205.16.37.39   (4) 205.16.37.32 and 255.16.37.47

Q.99 IEEE 802.3 standard defines _____ as the access method for first generation 10-Mbps Ethernet:

(1) CSMA/CA

(2) Non Persistent CSMA/CD

(3) 1-Persistent CSMA/CD

(4) p-Persistent CSMA/CD

Q.100 The protocol that automates the IP configuration including IP address, Subnet mask, default gateway and DNS information is

(1) SNMP

(2) DHCP

(3) SMTP

(4) ARP

Key

(1) 2	(2) 4	(3) 3	(4) 2
(5) 4	(6) 1	(7) 1	(8) 2
(9) 2	(10) 2	(11) 1	(12) 1
(13) 1	(14) 3	(15) 4	(16) 1
(17) 3	(18) 2	(19) 2	(20) 4
(21) 2	(22) 3	(23) 3	(24) 4
(25) 1	(26) 1	(27) 2	(28) 3
(29) 1	(30) 1	(31) 2	(32) 3
(33) 4	(34) 3	(35) 4	(36) 1
(37) 4	(38) 3	(39) 2	(40) 3
(41) 1	(42) 3	(43) 1	(44) 2
(45) 3	(46) 3	(47) 1	(48) 3
(49) 4	(50) 3	(51) 3	(52) 2
(53) 1	(54) 1	(55) 1	(56) 2
(57) 3	(58) 1	(59) 2	(60) 1
(61) 4	(62) 4	(63) 3	(64) 3
(65) 1	(66) 2	(67) 4	(68) 2
(69) 3	(70) 4	(71) 2	(72) 1
(73) 3	(74) 4	(75) 3	(76) 4
(77) 4	(78) 1	(79) 4	(80) 3
(81) 2	(82) 3	(83) 2	(84) 3
(85) 1	(86) 1	(87) 2	(88) 2
(89) 4	(90) 4	(91) 2	(92) 3
(93) 1	(94) 4	(95) 4	(96) 2
(97) 3	(98) 2	(99) 3	(100) 2