QUESTION PAPER - 2012

COMPUTER SCIENCE & ENGINEERING

Q.1 Which of the following is an advantage of virtual memory ?

(1) Processes can be given priority.

(2) Programs larger than the physical memory size can be run.

(3) Faster access to memory on an average.

(4) Linker can assign addresses independent of where the program will be loaded in physical memory.

Q.2 Which of the following is an advantage of memory interlacing ?

(1) A large memory is obtained.

(2) A non-volatile memory is obtained.

(3) The cost of the memory is reduced.

(4) Effective speed of the memory is increased.

Q.3 Which of the following devices should be given higher priority in assigning interrupts ?

(1) Printer   (2) Floppy disk   (3) Keyboard   (4) Hard disk

Q.4 _____ addressing mode permits relocation without any change to the code.

(1) Base register   (2) Indexed register   (3) Relative   (4) Indirect

Q.5 Between what components of a Computer does an I/O processor control the flow of information ?

(1) I/O devices and Cache memory   (2) I/O devices and Main memory

(3) Two I/O devices   (4) Main memory and Cache memory

Q.6 What 'C' command which is used to free the allocated memory ?

(1) Dispose   (2) Free   (3) Deallocate   (4) Refresh

Q.7 In order to realize dynamic memory allocation by using functions like malloc, calloc and realloc, which header file should be included ?

(1) string.h   (2) stdiomemory.h   (3) stdio.h   (4) stdlib.h

Q.8 What does 'stderr' in C language stands for ?

(1) Standard error streams   (2) Standard error types

(3) Standard error definitions   (4) Standard errors

Q.9 What is the output of the following 'C' code ?

```
main()
{
    static char a[ ] = "ECET12";
    char * b = "ECET12";
    printf("\n%d %d", sizeof(a),
    sizeof(b));
{
```

(1) a = 7, b = 2   (2) a = 2, b = 7   (3) a = 7, b = 6   (4) a = 7. b = 8

Q.10 What is the purpose of rewind() function in 'C' ?

(1) file pointer repositions to the starting of the file

(2) file pointer repositions to the end of file

(3) file pointer repositions to the starting of the line

(4) file pointer repositions starting of the word.

Q.11 The total number of nodes in a binary tree with 'n' leaves is _____.

(1) n   (2) 2n   (3) 2n – 1   (4) 2n – 2

Q.12 A tree is special case of a graph which consists of _____ number of cycles.

(1) 0   (2) 1   (3) 2   (4) more than 2

Q.13 A heap allows a very efficient implementation of a _____.

(1) Stack   (2) Queue   (3) Priority queue (4) Tree

Q.14 If the postorder traversing of a tree results in C F E D B J I H G A; then the preorder traversal would return what ?

(1) ABDCEFGHIJ (2) ABCDEFGHIJ   (3) ABCDEFHGIJ (4) ABCDFEGHIJ

Q.15 Which data structure allows deletion at both ends of the list but insertion at only one end ?

(1) Input-restricted dequeue   (2) Output-restricted dequeue

(3) Priority queue   (4) Circular queue

Q.16 _____ layer is not present in the TCP/IP reference model.

(1) Transport   (2) Session   (3) Internet   (4) Application

Q.17 _____ is the Protocol Data Unit (PDU) used at the network layer of the OSI model.

(1) Segment   (2) Frame   (3) Packet   (4) Bits

Q.18 Which layer in the OSI reference model takes the responsibility of flow control ?

(1) Application layer   (2) Transport layer

(3) Network layer   (4) Session layer

Q.19 _____ are the devices that operate at the network layer of the OSI model for forwarding the packets over WAN.

(1) Hubs   (2) Bridges   (3) Switches   (4) Routers

Q.20 What does SMTP stand for ?

(1) Standard message transfer protocol

(2) Standard mail transfer protocol

(3) Simple mail transfer protocol

(4) Simple message transfer protocol

Q.21 Identify the class of the IP address given in the binary representation below :

11000110.01110000.00011100.11111100

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

Q.22 Which of the following statement is typically FALSE about Ethernets ?

(1) Ethernets use circuit switching to send messages

(2) Ethernets are used in providing physical address

(3) Ethernet protocols use a collision-detection method to ensure that messages are transmitted properly

(4) Networks connected by Ethernets are limited in length to a few hundred meters

Q.23 _____ acts as security buffer between a company's private network and all external networks.

(1) Firewall   (2) Password

(3) Disaster recovery plan   (4) Virus checker

Q.24 How many bytes are used by the Class 'B' IP addresses to represent the Host and Network IDs?

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

Q.25 _____ protocol is used for remote login purpose.

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

Q.26 What is meant by a Process

(1) A program written in high level language and stored on the disk

(2) A program in execution

(3) A job stored in the secondary memory

(4) A job available in the main memory

Q.27 A computer system cannot boot if the _____ is not available on it

(1) Loader   (2) Linker   (3) Interpreter   (4) Operating System

Q.28 What is the use of Job Control Language (JCL) statements ?

(1) Allocate the CPU to a job

(2) Read the input from one device to another device

(3) Inform the OS, the start and end of a job in a batch

(4) For managing the memory

Q.29 Which, strategy allows the processes that are logically runnable to be temporarily suspended ?

(1) Shortest Job First (2) First come First served

(3) Non-preemptive scheduling (4) Round Robin

Q.30 _____ algorithm executes the shortest job first that has entered the queue of jobs.

(1) FIFO (2) SJF (3) Round Robin (4) LIFO

Q.31 Fragmentation of the file system can be temporarily avoided by _____

(1) Thrashing (2) CPU scheduling

(3) Compaction (4) I/O devices scheduling

Q.32 What is a page fault ?

(1) An error that occurs while a program accesses a page in the memory

(2) An access to a page that is currently not available in the memory

(3) A reference to a page of another program

(4) An error which is page specific

Q.33 Belady's Anomaly is a behaviour of _____ page replacement algorithm.

(1) Optimal (2) LRU (3) Circular FIFO (4) FIFO

Q.34 What is the special software used to create a job queue ?

(1) Device driver (2) Spooler (3) Linker (4) Loader

Q.35 Which of the following devices has the highest access time ?

(1) Floppy Disk (2) Cache memory

(3) Association Memory (4) Main memory

Q.36 Relational database is a group of

(1) Fields (2) Records (3) Tables (4) Packages

Q.37 The best way to classify the data models is by the degree of

(1) difficulty (2) abstraction (3) knowledge (4) unification

Q.38 Hierarchical database is not efficient when handling

(1) security (2) large amounts of data

(3) large number of transactions (4) 1:M relationships

Q.39 Which of the following is a Date function in SQL ?

(1) SYSDATE (2) SYS_DATE

(3) SYSTEM_DATE (4) CURRENT_DATE

Q.40 What needs to be created if Kishan is working with an employee table and wants to find out how many employees are working in India ?

(1) Create a new table (2) Create a new query

(3) Create a new form (4) Utilize the database wizard

Q.41 A normal form which is sufficient for the consideration of a relational database design is

(1) BCNF (2) 5NF (3) 4NF (4) 3NF

Q.42 Which of the following type of JOIN is not used in SQL ?

(1) Inner join　(2) Outer join　(3) Equi-join　(4) Non Equi-join

Q.43 Abbreviate SQL : _____

(1) Systematic Query Language　(2) Structured Query Language

(3) Structural Query Language　(4) Simple Query Language

Q.44 What is the command used in SQL to remove row(s) from a given table ?

(1) DELETE　(2) DROP　(3) ERASE　(4) REMOVE

Q.45 Where is the 'HAVING' clause of SQL used for querying ?

(1) Used for rows rather than columns　(2) Used for columns rather than rows

(3) Used for groups rather than rows　(4) Used for rows rather than groups

Q.46 If duplicate rows are to be avoided in the queried output using a SELECT statement, what qualifier should be used

(1) DEFINITE　(2) DISTINCT　(3) DISJOINT　(4) UNIQUE

Q.47 Select one equivalent SQL statement for the given query:

SELECT EMP_NAME FROM EMPLOYEE WHERE PLACE = 'HYD';

(1) SELECT EMP_NAME FROM EMPLOYEE WHERE PLACE IN ('HYD');

(2) SELECT EMP NAME IN EMPLOYEE WHERE PLACE IN ('HYD');

(3) SELECT EMP_NAME IN EMPLOYEE WHERE PLACE = 'H';

(4) SELECT EMP_NAME IN EMPLOYEE WHERE PLACE = 'HYD');

Q.48 In SQL what command is used to get sorted output of a given query ?

(1) GROUPBY　(2) ORDERBY　(3) SORTBY　(4) ARRANGEBY

Q.49 Multi-valued dependencies should _____ be eliminated.

(1) Never　(2) Rarely　(3) Always　(4) Frequently

Q.50 DROP statement in SQL belongs to which category statement

(1) DML statement (2) DDL statement　(3) DCL statement(4) TCL statement

Q.51 _____ storage class is not supported by C++ compiler.

(1) Dynamic　(2) Register　(3) Auto　(4) Mutable

Q.52 _____ feature is not at all supported by the C++ compiler.

(1) Operate overloading　(2) Exception handling

(3) Reflection　(4) Namespaces

Q.53 _____ keyword supports dynamic method resolution in C++.

(1) Abstract　(2) Virtual　(3) Dynamic　(4) Typeid

Q.54 Which of the following should be used to access an array element in C++ ?

(1) Dot operator　(2) Member name

(3) An index number　(4) Function name

Q.55 What is meant by operator overloading in C++ ?

(1) It is creating new operations

(2) It is creating new functions

(3) It is giving new meanings to existing C++ operators

(4) It is loading multiple operators into a given function

Q.56 What is meant by C++ pure virtual function ?

(1) A function which has no body

(2) A function which returns no value

(3) A function which is never used in a base class

(4) A function which is difficult to explain

Q.57 In C++ what does redirection perform.

(1) It redirects a file from a device to a stream

(2) It redirects a stream from a file to a console

(3) It redirects a device from the screen to a file

(4) It redirects the screen from, a device to a stream

Q.58 To which class of stream does 'cout' object in C++ belong to ?

(1) stringstream   (2) istream   (3) ostream   (4) ifstream

Q.59 Which of the following is used by an object to refer to itself

(1) this   (2) itself   (3) self   (4) own

Q.60 In C++ when no access specifier is explicitly mentioned for the base class _____ is the default inheritance type

(1) Public   (2) Private   (3) Internal   (4) Protector

Q.61 In C++, name mangling is used to support the feature called _____

(1) Overloading   (2) Overriding   (3) Data Hiding   (4) Abstraction

Q.62 Which of the following operators in C++ cannot be overloaded ?

(1) Assignment   (2) Equality

(3) Scope resolution   (4) Arrow

Q.63 _____ cannot be declared as a template in C++.

(1) Classes   (2) Member functions

(3) Global functions   (4) Macros

Q.64 Which of the following Inheritance mechanism is not supported in Java

(1) Single level   (2) Multiple level   (3) Multilevel   (4) All the above

Q.65 If class X is friend of class Y and if class Y is friend of class Z, which of the following is correct ?

(1) Class X is friend of Class Z

(2) Class Z is friend of Class X

(3) Class X and Class Z do not have any friend relationships

(4) Class Y is a mutual friend to Class X and Class Y

Q.66 What is the output of the following given Java code :

```
public class Ecet {
public static void main (string[] args) {
newEcet().go("hello", 1);
newEcet().go("hello","world", 2);
}
```

```
public void go (string y, int x) {
System.out.print(y[y.length-1]+"");
}}
```

(1) h he   (2) hello world   (3) world world   (4) compilation fails

Q.67 Which one of the following statements is TRUE ?

(1) At once, more than two threads may possibly end up in deadlock.

(2) The JVM implementation guarantees that multiple threads cannot enter into a deadlocked state.

(3) Deadlocked threads release once their sleep() method's sleep duration has expired.

(4) Deadlocking can occur only when the wait(), notify() and notifyAll() methods are used incorrectly.

Q.68 Fill up the blank with one of the following statements for the given Java code which allows Ecet class to compile :

```
class Navigation {
public enum Direction {North, South, East, West}
public class Ecet{

----------------

}
```

(1) Direction d = North;

(2) Navigation.Direction d = Navigation.Direction.North;

(3) Direction d = Direction.North;

(4) Navigation.Direction d = North;

Q.69 What is the output of the given Java code below ?

```
interface TestA { String to String( );}
public class Test {
public static void main (String[] args) {
System.out.println(newTestA() {
public String to String() {return "test";}
});
}
}
```

(1) test

(2) null

(3) An exception is thrown at runtime

(4) Compilation fails because of an error in line 1

Q.70 Given the following Java code, _____ can directly access and change the value of the variable name

Q.92 The registers which are used for the address calculations in based indexed addressing mode are _____

(1) BP & SI   (2) BP & DI   (3) BX & SI   (4) BX/BP & SI/DI

Q.93 Which of the following instruction is used for unconditional jump ?

(1) JMP   (2) JUMP   (3) JZ   (4) GO

Q.94 How is the implementation of the control section of Intel 8086 microprocessor done ?

(1) Using microprogramming

(2) Using nanoprogramming

(3) It is a combination of Micro-programming and Hard-wired designs

(4) Using hard-wired control in a random manner

Q.95 How many conditional flags are available in 80486 ?

(1) 6   (2) 8   (3) 10   (4) 16

Q.96 What address instructions are used by a Stack ?

(1) Zero   (2) One   (3) Two   (4) Three

Q.97 Which is the addressing mode where the operand is specified within-the instruction ?

(1) Direct   (2) Indirect   (3) Immediate   (4) Register

Q.98 EDRAM indicates _____.

(1) Extended DRAM   (2) Enhanced DRAM

(3) Electronic DRAM   (4) Electrical DRAM

Q.99 Which of the following matches better with DMA I/O ?

(1) High Speed RAM   (2) Printer

(3) ALU   (4) Disk

Q.100 Which of the following is not a form of memory ?

(1) Translation lookaside buffer   (2) Instruction opcode

(3) Instruction cache   (4) Instruction register

Key

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