

QUESTION PAPER - 2011

COMPUTER SCIENCE & ENGINEERING

- Q.1** The octal number equivalent of decimal 324.987 is
(1) 504.771 (2) 540.781 (3) 214.234 (4) 40.987
- Q.2** What is the output of the following 'for' Loop.
for (i = 2; i < 10; i = i*3)
print f ("%d", i)
(1) 2 6 9 (2) 2 5 8 (3) 1 3 9 (4) 2 6
- Q.3** Which of the following is the correct way of declaring a float pointer variable
(1) float ptr; (2) float *ptr; (3) *float ptr (4) fit ↑ ptr;
- Q.4** Which of the following case does not exist in complexity theory
(1) Best case (2) Worst case (3) Average case (4) Null case
- Q.5** Each array declaration need not give, implicitly or explicitly, the information about
(1) the name of array
(2) the data type of array
(3) the first data from the set to be stored
(4) the index set of the array
- Q.6** The memory address of fifth element of an array can be calculated by the formula where w is the number of words per memory cell for the array
(1) $LOC(Array[5]) = Base(Array[5]) + w(5 - \text{lower bound})$
(2) $LOC(Array[5]) = Base(Array[5]) + (5 - \text{lower bound})$
(3) $LOC(Array[5]) = Base(Array[4]) + 5(5 - \text{Upper bound})$
(4) $LOC(Array[5]) = Base(Array[4]) + (5 + \text{Upper bound})$
- Q.7** Given a doubly linked of integers how long will removal of particular node take in the worst case assuming we have a pointer to the node
(1) $O(n)$ (2) $O(n^2)$ (3) $O(1)$ (4) $O(\log n)$
- Q.8** When inorder traversing a tree resulted EACKFHDBG; the preorder traversal would return
(1) FAEKCDHGB (2) FAEKCDHGB (3) EAFKHDCBG (4) FEAKDCHBG
- Q.9** Which of the following sorting algorithm is of divide-and-conquer type?
(1) Bubble sort (2) Insertion sort (3) Quick sort (4) Heap sort
- Q.10** If a every node u in G is adjacent to every other node v in G, A graph is said to be
(1) isolated (2) complete (3) finite (4) strongly connected

- Q.11** In OSI network architecture, the dialogue control and token management are responsibility of
- (1) session layer (2) network layer (3) transport layer (4) data link layer
- Q.12** How many OSI layers are covered in the X.25 standard?
- (1) Two (2) Three (3) Seven (4) Six
- Q.13** Which of the following statement is incorrect?
- (1) the difference between synchronous and asynchronous transmission is the clocking derived from the data in synchronous transmission
- (2) Half duplex line is a communication line in which data can move in two directions, but not at the same time
- (3) Teleprocessing combines telecommunications and DP techniques in online activities
- (4) Batch processing is the preferred processing mode for telecommunication operation
- Q.14** Which of the following statement is incorrect?
- (1) Multiplexer are designed to accept data from several I/O devices and transmit unified stream of data on one communication line
- (2) HDLC is a standard synchronous communication protocol
- (3) RTS/CTS is the way the DTE indicates that it is ready to transmit data and the way the DCW indicates that it is ready to accept data
- (4) RTS/CTS is the way the terminal indicates ringing
- Q.15** The transmission signal coding method of T1 carrier is called
- (1) Bipolar (2) NRZ (3) Manchester (4) Binary
- Q.16** A standard program that has been modified to work on a LAN by including concurrency controls such as file and record locking is an example of _____
- (1) LAN intrinsic software (2) LAN aware software
- (3) Groupware (4) LAN ignorant software
- Q.17** What is the central device in star topology?
- (1) STP server (2) HUB/switch (3) PDC (4) Router
- Q.18** Which of the following signal is not standard RS-232-c signal?
- (1) VDR (2) RTS (3) CTS (4) DSR
- Q.19** To which class the computer belongs if its IP address is 192.5.5.0.
- (1) A (2) B (3) C (4) D
- Q.20** What is the main difference between DDCMP and SDLC?
- (1) DDCMP does not need special hardware to find the beginning of a message
- (2) DDCMP has a message header
- (3) SDLC has a IP address
- (4) SDLC does not use CRC

- Q.21** Which command is used to copy a file `wb` with the same name from the `programs` directory to the `misc.` directory?
- (1) `copy programs/wb misc/wb`
 - (2) `cp programs/wb misc`
 - (3) `copy a:programs/wb b:misc/wb`
 - (4) `tar programs/wb misc/wb`
- Q.22** The commonly used UNIX commands like `data`, `ls`, `cat`, etc., are stored in
- (1) `/dev` directory
 - (2) `/bin` and `/usr/bin` directories
 - (3) `/unix` directory
 - (4) `/tmp` directory
- Q.23** In OSI network, the routing of packets is a function of _____
- (1) application layer
 - (2) physical layer
 - (3) network layer
 - (4) session layer
- Q.24** Which type of switching uses the entire capacity of the dedicated link?
- (1) circuit switching
 - (2) datagram packet switching
 - (3) packet switching
 - (4) message switching
- Q.25** Which of the following are shared between a parent process and a child process?
- (1) External variables
 - (2) Local variables
 - (3) Pointer variables
 - (4) Pipes
- Q.26** _____ removes a deadlock by aborting some processes so that other processes involved in the deadlock can resume their operation
- (1) Deadlock resolution
 - (2) Deadlock detection
 - (3) Deadlock occurrence
 - (4) Deadlock avoidance
- Q.27** The sleeping barber problem is an example of
- (1) deadlock
 - (2) starvation
 - (3) semaphore
 - (4) live lock
- Q.28** Interrupt disabling is not possible in a _____
- (1) uniprocessor architecture
 - (2) multiprocessor architecture
 - (3) multiprogramming architecture
 - (4) uniprogramming architecture
- Q.29** A user process enters kernel mode by issuing a _____ when an exception is generated
- (1) program
 - (2) routine
 - (3) handler
 - (4) system call
- Q.30** Round Robin is the preemptive version of
- (1) FIFO
 - (2) LCFS
 - (3) SJF
 - (4) FCLS
- Q.31** _____ are used to keep track of both main and secondary memory.
- (1) Process tables
 - (2) File tables
 - (3) Memory tables
 - (4) I/O tables
- Q.32** When large volumes of data are to be moved, a more efficient technique is
- (1) interrupt driven I/O
 - (2) programmed I/O
 - (3) direct memory access
 - (4) I/O mapping

- Q.33** An _____ is used for the exchange of data between an I/O module and the processor
(1) I/O address registers (2) I/O buffer registers
(3) I/O data registers (4) I/O index registers
- Q.34** Which process no longer exists, but it leaves record for its parent process to collect
(1) created (2) zombie (3) preempted (4) user running
- Q.35** Which of the following is not an advantage of the database approach
(1) reduction of data redundancy (2) ability of associate deleted data
(3) increased security (4) program/data independence
- Q.36** In relation algebra the division operator divides a dividend A of degree $m+n$ by a divisor relation B of degree n and produces a result of degree
(1) $m-1$ (2) $m+1$ (3) $m*n$ (4) m
- Q.37** _____ operator is used to compare a value to a list of literal values that have been specified
(1) LIKE (2) COMPARE (3) BETWEEN (4) IN
- Q.38** In a relational model, degree is termed as
(1) no. of tables (2) no. of attributes (3) no. of rows (4) no. of candidate keys
- Q.39** The metadata is created by
(1) DML compiler (2) DML preprocessor (3) DDL interpreter (4) Query interpreter
- Q.40** Which of the following constitutes a basic set of operations for manipulating relational data?
(1) Relational algebra (2) TRC
(3) DRC (4) SQL
- Q.41** The operation which is not basic in relational algebra is
(1) JOIN (2) select (3) union (4) cartesian product
- Q.42** In SQL, testing a sub query for emptiness is done by
(1) DISTINCT (2) UNIQUE (3) NULL (4) EXISTS
- Q.43** In an ER-diagram Y is the dominant entity and X is the subordinate entity, then which of the following is incorrect
(1) Operationally, if Y is deleted so is X
(2) X's existence is dependent on Y
(3) If X is deleted so is Y
(4) If X is deleted, Y remains the same
- Q.44** Which of the following is not a characteristics of a relational database model
(1) TABLE (2) TREE structure
(3) records (4) complex logical relationship
- Q.45** The statement that is executed automatically by the system as a side effect of the modification of the database is
(1) backup (2) recovery (3) assertion (4) trigger

- Q.46** Generally speaking, for a weak entity set to be meaningful it must be part of a
- (1) one-to-one relationship
 - (2) one-to-many relationship
 - (3) many-to-many relationship
 - (4) many-to-one relationship
- Q.47** Assume transaction A holds a shared lock R, if transaction B also requests for a shared lock on R, it will
- (1) Result in a deadlock situation
 - (2) immediately be granted
 - (3) immediately be rejected
 - (4) be granted as soon as it is released by A
- Q.48** Which operator is used to create and concatenate a string?
- (1) ++
 - (2) &&
 - (3) &
 - (4) +
- Q.49** Which of the following types of class members can be part of the internal part of a class?
- (1) Private methods
 - (2) Public instance variables
 - (3) private constructors
 - (4) Public methods
- Q.50** What is an example of polymorphism?
- (1) Method overloading
 - (2) Anonymous classes
 - (3) Inner class
 - (4) Method over riding
- Q.51** What is the result of executing the following fragment of code :
- ```
boolean
flag = false;
if (flag == true)
{system.out.println("false");}
else
{system.out.println("false");}
```
- (1) nothing happens
  - (2) an exception is raised
  - (3) true is printed to standard out
  - (4) false is printed to standard out
- Q.52** Which of the following is illegal;
- (1) float f = 45.0 ;
  - (2) float f = 45.0
  - (3) doubled = 45.0 ;
  - (4) int i = 32;
- Q.53** Constructor is a method that determines how an object is
- (1) initialized when destroyed
  - (2) initialized
  - (3) initialized when created
  - (4) initialized when called
- Q.54** Which of the following wrapper classes cannot take a "string" in constructor
- (1) Long
  - (2) Boolean
  - (3) Character
  - (4) Integer
- Q.55** Final variables should be declared in the
- (1) inside constructors
  - (2) outside the methods
  - (3) inside methods
  - (4) inside classes

- Q.56** The java interpreter is used for the \_\_\_\_\_ of the source code.  
(1) debugging (2) execution (3) compiling (4) creation
- Q.57** Which one does not extend java. lang. number  
(1) Integer (2) Boolean (3) Short (4) Long
- Q.58** What will happen if you try to compile and run the following code? public class Q  
{public static void main (string arg v[])  
{int anar [] = new int [5];  
{System.out.print in (anar[0];}}  
(1) Error (2) null (3) 5 (4) 0
- Q.59** How can class be imported to a program?  
(1) import "class name"; (2) import "class name" + +;  
(2) import "class name"; (4) import "class name".\*;
- Q.60** Which statement is true about a non-static inner class?  
(1) It can access private instance variables in the enclosing object  
(2) It is accessible from any other class  
(3) It can only be instantiated in the enclosing class  
(4) It must implement an interface
- Q.61** Applets are executed generally in a  
(1) console (2) browser (3) server (4) network
- Q.62** Which one is a key word in Java?  
(1) friend (2) size of (3) extends (4) NULL
- Q.63** What will be printed out if this code is run with the following command line?  
java my\_prog good morning  
public class my\_prog  
{public static void main(string argv[])  
{system.out.print ln (argv [2])}}  
(1) my\_prog  
(2) exception raised: "java.lang.Array Index out of Bounds Exception:2"  
(3) morning  
(4) good
- Q.64** percent (A, "70, 81 \_\_\_\_ 80))=> placement (A, "Infosys")  
percent (A, "70, 71 \_\_\_\_ 80)=> placement (A, "Microsoft")  
percent (A, "70, 71 \_\_\_\_ 80)=> placement (A, "Dell")  
percent (A, "70, 71 \_\_\_\_ 80")=> placement (A, "IBM")  
These sets of rules clearly refer to \_\_\_\_\_ rule  
(1) Boolean association (2) Quantitative association  
(3) Single dimensional association (4) Multi dimensional association



- Q.65** A priori algorithm employs level-wise search, where k-itemsets uses \_\_\_\_\_ itemsets.  
(1) k (2) (k-1) (3) (k+1) (4) K(k+1)
- Q.66** Anti-monotone states that \_\_\_\_\_  
(1) if a set cannot pass a test, all its subsets also cannot pass the same test  
(2) if a set cannot pass a test, all its super sets pass the test  
(3) if a set pass a test, all its super sets cannot pass the same test  
(4) if a set pass the test, all its subsets cannot pass the same test
- Q.67** Transaction reduction implies \_\_\_\_\_  
(1) reducing the number of transactions scanned till previous iteration  
(2) reducing the number of transactions in the current iteration  
(3) reducing the number of transactions in the future iteration  
(4) reducing the number of iterations in a transaction
- Q.68** \_\_\_\_\_ is used to improve the efficiency of the Apriori algorithm  
(1) Berg queries (2) iceberg queries  
(3) ice burg queries (4) ice cube queries
- Q.69** Which threshold can be set up for passing down relatively frequent items to lower levels?  
(1) Level-class threshold (2) Level-shift threshold  
(3) Level-passage threshold (4) Level-jump threshold
- Q.70** Bayes theorem provides a way of calculating which probability?  
(1) posterior (2) prior (3) stable (4) ideal
- Q.71** A neural network containing N hidden layers is called as \_\_\_\_\_ layered neural network.  
(1) (N-1) (2) N (3) (N+1) (4) 2N
- Q.72** Software engineering primarily aims on developing  
(1) reliable software  
(2) cost effective software  
(3) reliable and cost effective software  
(4) only effective software
- Q.73** Which of the following comments about object oriented design of software, is not true?  
(1) Objects inherit the properties of the class  
(2) Classes are defined based on the attributes of objects  
(3) An object can belong to two classes  
(4) Classes are always different
- Q.74** Design phase will usually be  
(1) top-down (2) bottom-up (3) random (4) centre fringing
- Q.75** Which of the following types of maintenance takes the maximum chunk of the total maintenance effort in a typical life cycle of a software product?  
(1) Adaptive maintenance (2) Corrective maintenance  
(3) Preventive maintenance (4) Perfective maintenance

- Q.76** The data flow model of an application mainly shows
- (1) The underlying data and the relationship among them
  - (2) Processing requirements and the flow of data
  - (3) Decision and control information
  - (4) Communication and network structure
- Q.77** Which of the following graph theoretic concept will be useful in software testing?
- (1) Cyclomatic number
  - (2) Hamiltonian circuit
  - (3) Eulerian cycle
  - (4) Reliability cycle
- Q.78** Which of the following testing methods is normally used as the acceptance test for a software system?
- (1) Regression testing
  - (2) integration testing
  - (3) Unit testing
  - (4) Functional testing
- Q.79** Software testing techniques are most effective if applied immediately after
- (1) requirement specification
  - (2) design
  - (3) coding
  - (4) integration
- Q.80** In object - oriented design of software, objects have
- (1) attributes and name only
  - (2) operations and name only
  - (3) attributes, name and operations
  - (4) name only
- Q.81** The number of bits needed to address 4K memory is
- (1) 6
  - (2) 8
  - (3) 12
  - (4) 16
- Q.82** A NAND gate is equivalent to an AND gate plus a \_\_\_\_\_ gate put together
- (1) NOR
  - (2) NOT
  - (3) XOR
  - (4) OR
- Q.83** A parity bit is
- (1) Used to indicate uppercase letters
  - (2) Used to detect errors
  - (3) is the first bit in byte
  - (4) is the last bit in byte
- Q.84** Which of the following should get higher priority is assigning interrupt
- (1) Hard disk
  - (2) Key board
  - (3) Floppy disk
  - (4) Printer
- Q.85** Which of the following sets represents a universal logic family?
- (1) NAND
  - (2) XOR
  - (3) AND
  - (4) NOT
- Q.86** The technique of assigning a memory address to each I/O device in the computer system is called;
- (1) memory - mapped I/O
  - (2) ported I/O
  - (3) dedicated I/O
  - (4) wired I/O
- Q.87** A register in the microprocessor that keeps track of the answer or results of any arithmetic or logic operation is the :
- (1) stack pointer
  - (2) program counter
  - (3) instruction pointer
  - (4) accumulator



- Q.88** The memory address of the last location of a 1K byte memory chip is given as OFBFFH what will be address of the first location?  
 (1) OF817H (2) OF818H (3) OF800H (4) OF801H
- Q.89** Because microprocessor do not understand mnemonics as they are, they have to be converted to \_\_\_\_\_  
 (1) hexadecimal machine code (2) binary machine code  
 (3) assembly language (4) OCTAL code
- Q.90** The logical family used in systems requiring low power consumption  
 (1) ECL (2) MOS (3) TTL (4) CMOS
- Q.91** Which of the following combinations of gates does not allow the implementation of an arbitrary Boolean function?  
 (1) OR gates and inverters only  
 (2) NAND gates only  
 (3) OR gates and exclusive - OR gates only  
 (4) OR gates and NAND gates
- Q.92** The TRAP is one of the interrupts available its INTEL 8085. Which one of the following statements is true to TRAP?  
 (1) it is level triggered  
 (2) it is negative edge triggered  
 (3) it is positive edge triggered  
 (4) it is both positive edge triggered and level triggered
- Q.93** The output Qn of a J-K flip-flop is zero, it changes to 1 when a clock pulse is applied. The inputs Jn and Kn are respectively  
 (1) 1 and X (2) 0 and X (3) X and 0 (4) X and 1
- Q.94** In 8086/8088 microprocessor, the unit responsible for getting the instructions from memory and loading in the queue is  
 (1) Execution unit (2) Registers (3) Stack (4) Bus interface unit
- Q.95** The instruction MOV CL, [BX] {Di} + 8  
 (1) Based relative (2) Base indexed  
 (3) Indexed relative (4) Register indirect
- Q.96** Rotational latency refers to the time taken by the platter to  
 (1) make full rotation  
 (2) move into position over appropriate track  
 (3) rotate the correct sector under the head  
 (4) write the data into memory
- Q.97** A computer memory is composed of 8k words of 32 bits each. How many bytes does this memory contain?  
 (1) 8k (2) 32k (3) 16k (4) 4k

**Q.98** A memory management technique used to improve computer performance is


- (1) selecting memory chips based on their cost
- (2) storing maximum data on the disk
- (3) using the cache to store data that may be needed soon
- (4) preventing data movement from cache to primary memory

**Q.99** A high level view of Neumann architecture has the following three components

- (1) Buses, memory, I/O controllers
- (2) CPU, Hard disk, Floppy drive
- (3) Memory, CPU, Printers
- (4) Memory, I/O modules, CPU

**Q.100** RAM is called DRAM when

- |                                   |                                  |
|-----------------------------------|----------------------------------|
| (1) it is always loaded with data | (2) requires periodic refreshing |
| (3) can write several things      | (4) distributes the data fast    |

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*Key*

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