

QUESTION PAPER - 2013

COMPUTER SCIENCE & ENGINEERING

Q.1 _____ register keeps track of next executable instruction

- (1) AR (2) XR (3) PC (4) AC

Q.2 Cache memory works on the principle of _____

- (1) Locality of Data (2) Locality of Reference
(3) Locality of Memory (4) Locality of Data and memory

Q.3 Which of the following interrupts are unmaskable

- (1) RST 7.5 (2) TRAP (3) RST 5.5 (4) INTR

Q.4 The best data structure to check whether an arithmetic expression has balanced parentheses is _____

- (1) Stack (2) Queue (3) Tree (4) Graph

Q.5 The time complexity of the following C function is (assume $n > 0$) _____

```

{ if (n = 1)
  return 1;
  else
  return (recursive(n-1) + recursive(n-1))
}
```

- (1) 2^{n+1} (2) 2^n (3) n^2 (4) $\log n$

Q.6 Which combination of the integer variables x, y & z makes the variable "a" get the value 4 in the following expression ?

$a = ((x > y) ? (x > z) ? x : z) : ((y > z) > y : z)$

- (1) $x=3, y=4, z=2$ (2) $x=6, y=5, z=3$ (3) $x=6, y=3, z=5$ (4) $x=5, y=3, z=4$

Q.7 _____ traversal returns numbers inserted into a BST in ascending order

- (1) In order (2) Pre order (3) Post order (4) Con-pre order

Q.8 The result of following code is _____ void main ()

```

{ int const *p = 5;
  printf ("%d", ++(*p));
}
```

- (1) 5 (2) 6 (3) Compiler error (4) Runtime error

Q.9 The following C-function computes of m, n (let $n > m$)

int f(n, m)

```
if (n%m == 0)
return m;
n = n%m;
return f(m, n);
```

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(1) LCM (2) Factors (3) GCD (4) Multiples

Q.10 The worst case time complexity of Merge Sort _____

(1) $O(n^2)$ (2) $O(n \log n)$ (3) $O(\log n)$ (4) $O(n)$

Q.11 Which of the following control structure tests the condition at the end

(1) While (2) Do-While (3) For (4) Switch

Q.12 Which of the following is not a dynamic memory allocation function

(1) Malloc () (2) Calloc () (3) Realloc () (4) Alloc ()

Q.13 The default storage class of local variables is _____

(1) Auto (2) Extern (3) Register (4) Static

Q.14 Round robin scheduling is essentially the preemptive version of _____

(1) FIFO (2) Shortest job first
(3) Shortest remaining (4) Longest time first

Q.15 The mechanism that bring a page into memory only when it is needed is called _____

(1) Segmentation (2) Fragmentation
(3) Demand Paging (4) Page Replacement

Q.16 Which of the following disk scheduling techniques has a drawback of starvation ?

(1) SCAN (2) SSTF (3) FCFS (4) LIFO

Q.17 Virtual memory is _____

(1) An extreme large main memory
(2) An extreme large secondary memory
(3) An illusion of extreme large main memory
(4) An extension of secondary memory

Q.18 The essential content in each entry of a page table is

(1) Virtual page number
(2) Page frame number
(3) Both virtual page number and page frame number
(4) Access right information

- Q.19** Which of the following algorithm is the solution of critical section problem which contains concurrent processes ?
(1) SJF algorithm (2) lamport's bakery algorithm
(3) Leu algorithm (4) Banker's algorithm
- Q.20** To avoid race condition, the number of processes may be simultaneously inside their critical section is ____
(1) 1 (2) 2 (3) 16 (4) 32
- Q.21** 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 pages that used last in the given
- Q.22** Thrashing can be avoided if ____
(1) The pages, belonging to the working set of program, are in the main memory
(2) The speed of UI/O process is increased
(3) The speed of CPU is increased
(4) The capacity of memory is decreased
- Q.23** In which of storage placement strategies a program is placed in the largest available hole in the memory
(1) Best fit (2) First fit (3) Large fit (4) Worst fit
- Q.24** A table emp contains the values 10, 20, 30, null, null for a column col1. What is the result for following query : `SELECT count (col1) FROM emp;`
(1)* 3 (2) 5 (3) 4 (4) 2
- Q.25** Which of the following is aggregate function in SQL ?
(1) LTRIM () (2) TO_NUMBER () (3) SUM () (4) LENGTH ()
- Q.26** In E-R diagrams relationship is represented with ____ symbol
(1) Diamond (2) Rectangle (3) Doubled lines (4) Circle
- Q.27** The operation which combines results from two or more relations is ____
(1) Join (2) Combine (3) Concatenation (4) Add
- Q.28** Which of the following is not a property of transactions ?
(1) Atomicity (2) Concurrency (3) Isolation (4) Durability
- Q.29** Find the ODD data type out
(1) VARCHAR2 (2) RECORD (3) BOOLEAN (4) RAW
- Q.30** DROP is a ____ statement in SQL
(1) Query (2) Embedded SQL (3) DDL (4) DCL
- Q.31** SQL query to return the number of records in the "Persons" table is ____
(1) `Select COUNT (*) From Persons` (2) `Select * From Persons`
(3) `Select SUM (*) From Persons` (4) `Select AVG (*) From Persons`

- Q.32** The rule that a value of a foreign key must appear as a value of some specific table is called a _____ constraint
(1) Referential (2) Integrity (3) Combine (4) Primary
- Q.33** A relation is in _____ normal form if an attribute of a composite key is dependent on an attribute of other composite key
(1) 3NF (2) 2NF (3) BCNF (4) 1NF
- Q.34** PCB represents for _____
(1) Process Control Block (2) Program Control Block
(3) Process Count Block (4) Program Count Block
- Q.35** In which of the following memory management technique the problem of Internal fragmentation is present
(1) Segmentation (2) Paging
(3) Both paging and segmentation (4) Neither paging nor segmentation
- Q.36** Which of the following is used for modulation and demodulation ?
(1) Modem (2) Protocols (3) Gateway (4) Multiplexer
- Q.37** Which of the following TCP/IP protocol is used for transferring electronic mail messages from one machine to another ?
(1) FTP (2) SNMP (3) SMTP (4) RPC
- Q.38** Which of the following device is used to connect two systems, especially if the systems use different protocols ?
(1) Hub (2) Bridge (3) Gateway (4) Repeater
- Q.39** The slowest transmission speeds are those of
(1) Twisted-pair wire (2) Coaxial cable
(3) Fiber-optic cable (4) Microwaves
- Q.40** An error - detecting code inserted as a field in a block of data to be transmitted is known as
(1) Frame check sequence (2) Error detecting code
(3) Checksum (4) Flow control
- Q.41** Error detection at a data link level is achieved by
(1) Bit stuffing (2) Cyclic redundancy codes
(3) Hamming codes (4) Equalization
- Q.42** Which IP address class has few hosts per network ?
(1) D (2) C (3) B (4) A
- Q.43** Which of the following specifies the network address and host address of the computer?
(1) The IP address (2) The TCP address
(3) The subnet mask (4) The default gateway
- Q.44** Routing tables of a router keeps track of
(1) MAC Address Assignments
(2) Port Assignments to network devices
(3) Distribute IP address to network devices
(4) Routes to use for forwarding data to its destination

Q.45 Which of the following can be Software ?

- (1) Routers (2) Firewalls (3) Gateway (4) Modems

Q.46 The default access specifier is

- (1) Public (2) Private (3) Protected (4) Friend

Q.47 When a base class is privately inherited by a derived class, public members of the base class become _____ members of the derived class

- (1) Private (2) Public (3) Protected (4) Friend

Q.48 C++ uses a unique keyword called _____ to represent an object that invokes a member function

- (1) This (2) New (3) Delete (4) Malloc

Q.49 The wrapping up of data and functions into a single unit is known as

- (1) Polymorphism (2) Abstraction (3) Encapsulation (4) Inheritance

Q.50 If class A is friend of class B then class B is _____

- (1) Automatically friend of A
(2) Automatically friend of derived class A
(3) Not automatically friend of A
(4) Automatically friend of derived class of B

Q.51 The operator that can not be overloaded _____

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

Q.52 Which of the following is not construction ?

- (1) Friend constructor (2) Copy constructor
(3) Parameterized constructor (4) Default constructor

Q.53 The declaration of pure virtual function is _____

- (1) Virtual void display () {0}; (2) Virtual void display = 0;
(3) Void display () = 0; (4) Virtual void display () = 0;

Q.54 Which inheritance is not supported by C++

- (1) Multilevel (2) Single (3) Hybrid (4) Multiple

Q.55 The legal access to a class data members using this pointer _____

- (1) this->x (2) this.x (3) *this.x (4) *this(x)

Q.56 The memory allocated in microprocessor 8086 is

- (1) 100 Kb (2) 100 MB (3) 1 MB (4) 1 KB

Q.57 The physical Address of 8086 microprocessor consists of _____ Bits

- (1) 4 (2) 8 (3) 16 (4) 20

Q.58 What is minimum size of a logical segments in 8086 of size 64 Kb

- (1) 4 (2) 8 (3) 16 (4) 20

Q.59 CLD instruction is used in _____ instructions

- (1) LOOP (2) Branch (3) String (4) Flag

Q.60 No. of addressing Modes Present in 8086 Microprocessor are _____

- (1) 4 (2) 8 (3) 7 (4) 16

Q.61 STD is abbreviated as

- (1) Store trap flag (2) Set trap flag
(3) Store detection flag (4) Set direction flag

Q.62 Flags present on 8086 Micro processor are _____

- (1) 8 (2) 9 (3) 10. (4) 11

Q.63 In 8086 microprocessor, which of the following interrupt has the highest priority

- (1) Over flow (2) DIVO (3) NMI (4) Type 255

Q.64 ALE stands for

- (1) Accumulator Latch enable (2) Auto latch enable
(3) Address latch enable (4) Address & Data latch enable

Q.65 8255 is called as

- (1) Timers (2) DMA (3) PPI (4) None

Q.66 Which of the following is not the method of Thread Class ?

- (1) Start (2) Stop (3) Run (4) Sleep

Q.67 Which of the following event is generated when a scroll bar is manipulated ?

- (1) Action Event (2) Adjustment Event
(3) Container Event (4) Item Event

Q.68 Which of the following is not an AWT class ?

- (1) Image (2) Event (3) Cursor (4) Applet

Q.69 If a class includes an interface but does not fully implement the methods defined by that interface, then that class must be declared as _____

- (1) Abstract (2) Static (3) Final (4) Public

Q.70 A sub-class can call a constructor defined by its super-class by using _____ keyword

- (1) Extend (2) Final (3) Super (4) This

Q.71 Objects are passed by use of _____ in JAVA

- (1) Call-by-name (2) Call-by-reference (3) Call-by-value (4) Call-by-object

Q.72 Which is the default layout manager ?

- (1) Border Layout (2) Grid Layout (3) Flow Layout (4) Card Layout

Q.73 The _____ method is used just before an object is destroyed and can be called prior to garbage collection

- (1) Final (2) Finally (3) Finalize (4) Finalization

Q.74 The _____ is the mechanism by which a call to an overridden method is resolved at runtime rather than compile time

- (1) Dynamic method dispatch (2) Static method dispatch
(3) Automatic method dispatch (4) Through method dispatch

Q.75 Which package contains Event Object class ?


- (1) Java.lang (2) Java.util (3) Java.io (4) Java.net

- Q.76** Which property determines whether a control is displayed to the user ?
(1) Hide (2) Show (3) Visible (4) Enable
- Q.77** The Cancel Button property belongs to which object ?
(1) Button (2) Form (3) Label (4) Text Box
- Q.78** Which of the following object is not an ASP component
(1) File axis (2) Ad Rotator (3) Counter (4) Link counter
- Q.79** Which user action will not generate a server-side event ?
(1) Mouse Move (2) Text Change (3) Button Click (4) Mouse click
- Q.80** Which of the following control structure is not available in VB Script
(1) If statement (2) Nest if statement
(3) Switch case shunt (4) If-then-else if-statement
- Q.81** Which of the following is used to increase the row height ?
(1) Cell spacing (2) Cell padding (3) Row span (4) Col span
- Q.82** Which is the largest Heading Tag ?
(1) H1 (2) H3 (3) H4 (4) H6
- Q.83** Choose odd one tag of HTML ?
(1) Table (2) Tr (3) Td (4) Form
- Q.84** HTML tag for text scrolling is ____
(1) <scroll> </scroll> (2) <move> </move>
(3) <marque> </marque> (4) <round> </round>
- Q.85** HTML tag for line break is ____
(1) *
 (2) <p/> (3) <1br/> (4) <break/>
- Q.86** If 73_x (x-base system) is equal to 54 (y-base system), the possible values of x and y are :
(1) 8, 16 (2) 10, 12 (3) 9, 13 (4) 8, 11
- Q.87** Consider the following Boolean function of four variables
 $f(w,x,y,z) = S(1, 3, 4, 6, 9, 11, 12, 14)$ the function is ____
(1) Independent of one variable (2) Independent of two variables
(3) Independent of three variables (4) Dependent on all the variables
- Q.88** In an SR latch made by cross coupling two NAND gates, if both S and R inputs are set to 0, then it will result in ____
(1) $Q=0, Q'=1$ (2) $Q=1, Q'=0$ (3) $Q=1, Q'=1$ (4) Indeterminate states
- Q.89** The minimum number of D flip-flops needed to design a mod - 258 counter is ____
(1) 9 (2) 8 (3) 512 (4) 258
- Q.90** How many 3-to-8 line decoders with an enable input are needed to construct a 6-to-64 line decoder without using any other logic gates ?
(1) 7 (2) 8 (3) 9 (4) 10

- Q.91** What will be the value of $f = (x + y) (x'y)$?
(1) 0 (2) 1 (3) x (4) y
- Q.92** What is the minimum number of 2-input NAND gates used to perform the function of 2-input OR gate ?
(1) 2 (2) 3 (3) 4 (4) 6
- Q.93** The clear and preset inputs of the JK-flip flop are known as _____.
(1) Synchronous input (2) Asynchronous input
(3) Directed input (4) Re-directed input
- Q.94** Which of the following addressing modes are suitable for program relocation at run time?
(1) Absolute addressing (2) Direct addressing
(3) Relative addressing (4) Indirect addressing
- Q.95** Swap space in the disk is used for _____.
(1) Saving temporary html pages (2) Saving process data
(3) Storing the super block (4) Storing the device drivers
- Q.96** Name of the I/o scheduling algorithm that moves the head in one direction until all requests have been serviced and then reverse
(1) FCFS (2) C-SCAN (3) SCAN (4) Greedy
- Q.97** How many $32\text{ K} \times 1$ RAM chips are need to provide a memory capacity of 256 K-bytes?
(1) 8 (2) 32 (3) 64 (4) 128
- Q.98** The cylinder skew problem is concerned with which of the following ?
(1) Semaphore (2) Thrashing (3) Interleaving (4) Deadlock
- Q.99** Which of the following is a free space management technique
(1) Paging (2) Bitmap (3) Segmentation (4) Demand paging
- Q.100** MIMD stands for _____.
(1) Multiple instructions multiple data (2) Multiple instructions Memory data
(3) Memory instructions multiple data (4) Memory instructions Memory data

Key

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


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