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1. For Intel Core i3 processor, GMCH is integrated with :

    (A) South Bridge   (B) GPU

    (C) North Bridge   (D) FCH

2. In order to perform a critical task in timeliness, a multimedia system may use which of the following disk scheduling?

    (A) SSTF   (B) SATF

    (C) Elevator   (D) Real Time

3. An omega switching network with n CPU and n memories requires how many switches?

    (A) $(n \log_2 n)/2$ (B) $n/2(n \log_2 n)$

    (C) $\log_2 n$ (D) $\log_2 n/2$

4. The minimum pit length for a single layer DVD is :

    (A) 500   (B) 400

    (C) 600   (D) 250

5. A pipelining system with n segments takes 50 sub operations in a sequence. The time taken to complete a sub operation in each segment is 8 $n$sec. If the task is completed in 424 $n$sec, what is the value of n?

    (A) 2   (B) 8

    (C) 4   (D) 16

6. In multiprocessor system, a processor generated signal that serves to prevent other processors from using the system bus as long as the signal is active can be called as :

    (A) Semaphore   (B) Pipe

    (C) Hardware Lock   (D) Critical Session

7. At the beginning of an instruction cycle, the content of the Instruction Register is 5 and that of Program Counter is 320. When the instruction is read, the address part of the instruction is the number 7. Then the effective address in relative address mode is :

    (A) 328   (B) 327

    (C) 325   (D) 342

A   3

8. The return address from a subroutine call is arranged as :
   (A) Round Robin   (B) FIFO
   (C) LIFO   (D) Queue

9. The Bootstrap Loader resides in :
   (A) Hard Disk   (B) Any bootable device
   (C) RAM   (D) ROM

10. The IRQ commonly assigned to Hard Disk Controller is :
    (A) 11   (B) 12
    (C) 13   (D) 14

11. For DDR2 type RAM with 8 internal blocks and clock speed 533 MHz, the maximum average periodic refresh rate can be :
    (A) 4.5   (B) 7.8
    (C) 33.3   (D) 17.5

12. An operating system written as a set of procedures in which, each can call any other without any reservation is :
    (A) Virtual System   (B) Layered System
    (C) Distributed System   (D) Monolithic System

13. A program in execution state is called as :
    (A) Shell   (B) Process
    (C) Task   (D) Thread

14. A situation in which a multiprogramming system spends more time in page I/O :
    (A) Starvation   (B) Dead Lock
    (C) Fragmentation   (D) Thrashing

15. Calculate the average access time for the sector of a disk with 512 bytes per sector and 10 ms of average seek time. The disk rotates at a speed of 7200 rpm and transfers data at a rate 4 MB/Sec. The controller overhead is 1 ms. Assume that there is no service time :
    (A) 19.6 ms   (B) 16.2 ms
    (C) 15.3 ms   (D) 10.3 ms

16. When a process wants to print a file, it writes the file name in a directory called :
    (A) Spooler   (B) Buffer
    (C) Daemon   (D) Log

17. In a demand paging system, M is the time to access memory, F is the average time to service a page fault. P is the probability of page fault. Then the effective access time is :

   (A) $P*M+(1-P)*F$ (B) $M+(1-P)*F$

   (C) $(1-P)*M+P*F$ (D) $(M+F)*P$

18. Externally defined symbols are resolved by :

   (A) Compiler   (B) Linker

   (C) Loader   (D) Lexical Analyser

19. The initial value of a semaphore that ensures only one of the many processes enter the critical session is :

   (A) 0   (B) 1

   (C) −1   (D) 2

20. Debugging a kernel code is a difficult task, because of :

   (A) kernel code cannot be executed easily under a debugger

   (B) bugs in a kernel code cannot be traced easily, because it is a set of procedures related to a separate process and there will be a little evidence to track the errors

   (C) errors may be hard to reproduce and may collapse the entire system

   (D) all the above reasons

21. Which of the following HTML tag has an attribute called Frame?

   (A) <INPUT>   (B) <FORM>

   (C) <FRAMESET>   (D) <TABLE>

22. The HTML DOM Event that is triggered automatically when a user enters a web page is :

   (A) OnLoad   (B) OnFocus

   (C) OnOpen   (D) OnShow

23. CORBA programmers can develop distributed applications in C++/Java using :

   (A) Orbix   (B) OpalOrb

   (C) GIOP   (D) EJB

24. XML captures Hypertext information using :

   (A) <A>   (B) XLL

   (C) XLS   (D) DTD

25. In DHCP, the UDP port number for sending data to the server is :

   (A) 60   (B) 62

   (C) 65   (D) 67

26. Which of the following statement is *false*?

    (A)   It is not possible to convert an HTML document into an XML document

    (B)   Both XML and HTML are subset of SGML

    (C)   A well formatted XML document need not require DTD

    (D)   CSS works better with XML than with HTML

27. In a style sheet, the style rule from another CSS file can be loaded using :

    (A)   @include   (B)   @import

    (C)   @attach   (D)   @load

28. The easiest method for a Web Server program to store the client information in a web browser for future use is :

    (A)   Applet   (B)   Cookie

    (C)   Template   (D)   Log file

29. A form of address spoofing resulting in denial of service attack :

    (A)   Session Hijacking   (B)   Island Hopping

    (C)   Sniffing   (D)   War Dialing

30. Which of the following is a JavaScript debugging method?

    (A)   window.alert   (B)   console.log

    (C)   document.write   (D)   document.getElementById

31. Which of the following statement is *false*?

    (A)   Samba can play a number of server roles such as File Server, Print Server, Primary Domain Controller etc.

    (B)   Samba allows to share files with windows host

    (C)   SWAT requires no web server running

    (D)   SWAT interface cannot be directly accessed from web browser

32. Simplest way to pass data between two Linux programs running in a system is :

    (A)   Socket   (B)   Pipe

    (C)   Semaphore   (D)   RPC

33. The Linux command that can be used to search for a pattern matching string in a file :

    (A)   find   (B)   which

    (C)   grep   (D)   search

34. In Redhat Linux, the powerful and secure method for network configuration is :
    (A) NetBios   (B) Netstart
    (C) IPSec   (D) Apache

35. The file system that is the best choice for new installations of Linux is :
    (A) NTFS   (B) EX2
    (C) EX4   (D) JFS

36. In a Linux kernel, two mapping registers are simultaneously used as compatibly mapped buffers for CPU and peripherals. Then the DMA Mapping is :
    (A) Consistent Mapping   (B) Buffer Mapping
    (C) Streaming Mapping   (D) Scatter Mapping

37. A format that can only archive a group related files into a single file and cannot perform any compression by itself :
    (A) rar   (B) bz2
    (C) tar   (D) gz

38. GNOME Display Manager can be configured by editing :
    (A) gdm.conf   (B) GNOME.conf
    (C) Xserver.conf   (D) XDM.conf

39. The powerful online help system of Linux is :
    (A) who   (B) man
    (C) more   (D) how

40. A Linux tool that can be used to create hard disk partitions *only* at the time of Linux installation :
    (A) fdisk   (B) cfdisk
    (C) Disk Mount   (D) DRUID

41. The average time required to perform a successful sequential search for an element in an array with n elements :
    (A) $n/2$ (B) $(n+1)/2$
    (C) $(n-1)/2$ (D) $2n$

42. Each node in a tree has a value greater than all values in the left subtree and has a value less than all values in the right subtree. Then the tree is :
    (A) Binary search tree   (B) Complete tree
    (C) Balanced tree   (D) Threaded tree

43. The sort method that switches the adjacent elements, if needed after comparison is :

    (A) Heap sort
    (B) Quick sort
    (C) Insertion sort
    (D) Bubble sort

44. Minimum number of queues needed to implement the priority queue is :

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

45. After a sequence of steps in an algorithm, a linked list reaches the following step,

    START = NULL

    Then the situation is,

    (A) overflow
    (B) underflow
    (C) initialisation
    (D) saturation

46. The result of following expression in polish notation is

    4 3 2 + * 8 4 / −

    (A) 13
    (B) 12
    (C) 18
    (D) 34

47. The data structure that can implement a recursive procedure is :

    (A) Tree
    (B) Linked List
    (C) Queue
    (D) Stack

48. For a sorted linked list of length n, the worst case time required to search a given element is :

    (A) $O(n)$
    (B) $O(2n)$
    (C) $O(\log_2 n)$
    (D) $O(\log_2 2n)$

49. The characteristic of the elements that is maximum utilised in binary search is :

    (A) Length of the list
    (B) Number of elements in the list
    (C) Order of the list
    (D) Highest value in the list

50. For a binary tree with nine nodes, the result of inorder traversal is : D B A G E C H F I. And that of postorder traversal is : D B G E H I F C A. Then the result of preorder traversal is :

    (A) A B D C E G F H I
    (B) A B D E C F G H I
    (C) A D B C E F G H I
    (D) A D B E F C G H I

51. The communication device that uses spanning tree algorithm to avoid loops :

    (A)   Router   (B)   Gateway

    (C)   Bridge   (D)   Switch

52. Delaying an outgoing control frame in order to hook onto the next outgoing data frame is called :

    (A)   Packet Sniffing   (B)   Compounding

    (C)   Optimal Routing   (D)   Piggy Backing

53. Dijkstra's algorithm facilitates :

    (A)   Multipathing   (B)   Shortest Path Routing

    (C)   Isolated Routing   (D)   Centralised Routing

54. The OSI Layer in which the auto negation resides is :

    (A)   Physical   (B)   Network

    (C)   Transport   (D)   Data Link

55. The transmission media that uses BNC connector is :

    (A)   Coaxial Cable   (B)   UTP

    (C)   STP   (D)   Optical Fiber

56. The mode of communication used in a serial communication channel is :

    (A)   Simplex   (B)   Half Duplex

    (C)   Full Duplex   (D)   Both (B) and (C)

57. The communication standard for a wireless network is specified by :

    (A)   802.11   (B)   802.21

    (C)   802.8   (D)   802.12

58. The FDDI network is an example of :

    (A)   Bus   (B)   Star

    (C)   Ring   (D)   Mesh

59. A standard protocol for packet switching is :

    (A)   POTS   (B)   SMTP

    (C)   PSTN   (D)   X.25

60. The number of bits in a MAC Address is :
    (A) 32   (B) 48
    (C) 64   (D) 128

61. Which of the following is *not* a relational operator?
    (A) Difference   (B) Addition
    (C) Division   (D) Selection

62. In DBMS, the front end application performs :
    (A) Storage function   (B) Access control
    (C) Processing function   (D) All of the above

63. In a table, the relationship among a set of values are represented by :
    (A) Tuple   (B) Attribute
    (C) Entity   (D) Key

64. The Schema that provides a standard way of organising information into accessible parts :
    (A) logical   (B) physical
    (C) external   (D) storage level

65. The physical location of a database record is determined by a key transformation in :
    (A) Index   (B) Random
    (C) Hash   (D) Pointer

66. Which of the following is *not* a set operator in SQL?
    (A) UNION   (B) UNION ALL
    (C) MINUS   (D) LIKE

67. Which one of the following is a procedural language?
    (A) Domain relational calculus (B) System-R
    (C) Query language   (D) Relational algebra

68. A buffer that has been changed in database buffer memory, but not yet written to disk is :
    (A) Swap space   (B) Latch
    (C) Redo Log   (D) Dirty Block

69. The timestamp ordering that makes no distinction between the Read and Write access so that only a single value is required for each granule is :
    (A) Partial timestamp ordering   (B) Total timestamp ordering
    (C) Multi version timestamp ordering (D) Optimal timestamp ordering

70. The constraint specifying that account number must be in between 50000 and 80000 is a :

    (A) Integrity constraint   (B) Referential constraint

    (C) Default constraint   (D) Key constraint

71. In a Java program, the length in pixel of a string can be obtained using the method :

    (A) stringwidth   (B) strlength

    (C) length   (D) strwidth

72. Select the correct statement from the following :

    (A) char p = (char*)malloc(100);   (B) char *p = (char) malloc(100);

    (C) char p = (malloc(100));   (D) char *p = (char*)malloc(100);

73. The statement that is least preferred in C programs in general is :

    (A) Recursion   (B) Nesting of different type of loops

    (C) Double pointer   (D) Unconditional Jump to a label

74. What will be the output of following C++ program?

```
#include<iostream.h>
void main ( )
{
        char *cp="computer";
        cp+=2;
        (*cp) ++;
        cout<<cp;
}
```

    (A) puter   (B) mputer

    (C) nputer   (D) quter

75. What will be the output of following C++ program?

```
#include<iostream.h>
void main ( )
{
        int x=10, y=5, z;
        z= ++x+(++y) ++;
        cout<<z;
}
```

    (A) 15   (B) 16

    (C) 17   (D) 18

76. In order to get the MIME type of a file, a Servelt may use the methods defined in the interface :

    (A) servlet Info
    (B) servlet container
    (C) Servlet Config
    (D) servlet context

77. Java method that can be used to pause the current thread execution until and unless another thread completes its execution :

    (A) sleep
    (B) yield
    (C) join
    (D) suspend

78. Which Java interface can be used to store objects using a key-value pair, avoiding duplicate values?

    (A) Java.util.Collection
    (B) Java.util.Set
    (C) Java.util.List
    (D) Java.util.Map

79. Which of the following statement is *false* for C++ programs?

    (A) Throw cannot be executed from a function called from a try block
    (B) Unhandled throw results in an abnormal program termination
    (C) Throw is a keyword for newer versions of C++ compiler
    (D) Catch block may be selected by matching data type with the value given in throw

80. Which of the following data type can be used along with switch statement for comparison, in C++?

    (A) (int *)
    (B) double
    (C) enum
    (D) struct

81. 67th can Golden plan for best film given for :

    (A) Goodbye to language
    (B) The Wonders
    (C) Mister Turn
    (D) Winter Sleep

82. The 'Ring Spot Virus' is the most destructive disease of :

    (A) Papaya
    (B) Banana
    (C) Mango
    (D) Coffee

83. The ratio of width of our National Flag to its length is :

    (A) 3 : 5
    (B) 2 : 4
    (C) 2 : 3
    (D) 3 : 4

84. Prime Minister Narendra Modi sworn is as the :
    (A) 16th Prime Minister   (B) 15th Prime Minister
    (C) 14th Prime Minister   (D) 13th Prime Minister

85. The fourth Chief Minister of Kerala :
    (A) EMS   (B) Pattom Thanupillai
    (C) R. Sankar   (D) A.K. Antony

86. Who is known as 'Indian Bismark?
    (A) Kamaraj   (B) Nehru
    (C) Sardar Vallabhai Patel   (D) Rajaji

87. Kerala Varma Pazhassi Raja was short to death in :
    (A) 1805, June 11   (B) 1805, July 7
    (C) 1805, October 30   (D) 1805, November 30

88. Which of the following is a biography of the lady Mountbatten?
    (A) Edwine Mountbatten
    (B) Edwine Mountbatten – A life of her own
    (C) Edwine Mountbatten – Her relationship with Nehru
    (D) Mountbatten

89. Durant Cup is associated with :
    (A) Volley ball   (B) Foot ball
    (C) Cricket   (D) Hockey

90. National Maritime day follows on :
    (A) April 5   (B) June 5
    (C) October 5   (D) September 5

91. The temple entry proclamation of Sree Chithira Thirunal was in the year :
    (A) 1933   (B) 1934
    (C) 1935   (D) 1936

92. The ozone layer restricts :
    (A) Visible light   (B) Infrared radiation
    (C) Ultraviolet radiation   (D) X-rays and Gamma rays

93. Each year World Red Cross and Red Crescent day is :

(A) May 8   (B) May 28

(C) January 10   (D) March 20

94. The proposed Ken-Betwa river linking project is in which state?

(A) Maharashtra   (B) Odisha

(C) Gujarat   (D) Madhya Pradesh

95. The uprising of 1857 was described as the first war of Indian Independence by :

(A) B.G. Tilak   (B) V.D. Savarkar

(C) S.N. Sen   (D) R.C. Majumdar

96. The title of 'Viceroy' was added to the office of the Governor General of India for the first time in :

(A) 1848   (B) 1856

(C) 1858   (D) 1862

97. Who among the following belong to Moderates?

(A) B.G. Tilak   (B) W.C. Banerjee

(C) Lala Lajpat Rai   (D) Bipin Chandra Pal

98. Cripps Mission arrived in India in the year :

(A) 1947   (B) 1946

(C) 1942   (D) 1940

99. The Indian who attended all the Three Round Table Conference was :

(A) Dr. B.R. Ambedkar   (B) Mahatma Gandhi

(C) Muhammad Ali Jinnah   (D) Annie Besant

100. Who is the father of English poetry?

(A) Milton   (B) Wordsworth

(C) Charles Dickens   (D) Chaucer