

HSST COMPUTER SCIENCE - 2004

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17. Hashing is a search technique with complexity :
- (A)  $O(1)$ .  (B)  $O(\log N)$ .  
(C)  $O(N)$ . (D)  $O(N^2)$ .
18. Sparse matrices have :
- (A) Many non-zero entries. (B) Many Zero entries.   
(C) Higher dimension. (D) None of the above.
19. A large number of computers in a wide geographical area can be connected using :
- (A) Twisted pair. (B) Coaxial cable.  
 (C) Communication satellite. (D) LAN card.
20. A group of parallel lines that connect 2 or more devices is called a :
- (A) Bus. (B) Band.  
(C) Network. (D) Switch.
1. Which of the following is not a part of CPU ?
- (A) ALU. (B) Control unit.  
 (C) Memory. *Ans* (D) Instruction Decoder.
2. CD-ROM is a :
- (A) Semiconductor memory. (B) Magnetic memory.  
(C) Register Memory. (D) Optical Memory. *Ans*
3. Which memory is non-volatile and may be written only once ?
- (A) ROM.  (B) PROM.  
(C) EPROM. (D) RAM.
4. Which of the following is not an impact printer ?
- (A) Laser printer. *non* (B) Inkjet printer. *non*  
(C) Dot matrix printer. *impact* (D) Daisy wheel printer. *impact*
5. A display scheme in which the image to be displayed is stored as a matrix of pixels is :
- (A) Vector scan. (B) Raster scan.  
(C) Random scan. (D) DVST.

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26. The term DVD stands for :
- (A) Digital Volatile Disk. (B) Digital Virtual Disk.  
(C) Digital Versatile Disk. (D) Digital Volume Disk.
27. The output of a standard TTL is :
- (A) Multi emitter. (B) Phase splitter.  
(C) Current Amplifier. (D) Totempole.
28. The main advantage of CMOS logic over TTL :
- (A) Low power dissipation. (B) High speed. *ELV*  
(C) High cost. (D) Low propagation delay.
29. The boolean expression  $A + \bar{A}B$  can be simplified to :
- (A) A. (B) B.  
(C) A + B. (D) Can not be simplified further.
30. The time elapsed between the initiation of a memory operation and the completion of the operation is :
- (A) Cycle time. (B) Transfer time.  
(C) Seek time. (D) Access time.
31. Compared to static RAM, Dynamic RAM has :
- (A) High bit density. *SRAM* (B) High speed. *SRAM*  
(C) High cost. *SRAM* (D) Low bit density. *AM*
32. Pentium IV is an example of a :
- (A) Microcomputer. (B) 32-bit microprocessor.  
(C) 64-bit microprocessor. (D) Micro controller.
33. In a microprocessor, which of the following register is used to indicate the next instruction to be executed ?
- (A) Instruction Register. (B) Instruction Decoder.  
(C) Stack Pointer. (D) Program Counter. *SRAM can handle clock*
34. Compiler is an example of a :
- (A) Hardware. (B) Application software.  
(C) System software. (D) None of the above.

35. A software stored in a ROM is known as:
- (A) ROM ware. (B) Firmware.  
(C) Hardware. (D) Freeware.
36. Microprogrammed control unit is a technique:
- (A) For programming microprocessors.  
(B) Faster than hardwired control.  
(C) More flexible than hardwired control.  
(D) For programming micro controllers.
37. Compared to CISC, which of the following is not a feature of RISC?
- (A) Fewer instructions. (B) Fewer addressing modes.  
(C) Larger number of registers. (D) Microprogrammed control of unit.
38. In compilers, syntax analysis is done by:
- (A) Parser. (B) Scanner.  
(C) Interpreter. (D) Lexical analyser.
39. The number of edges in a complete undirected graph of  $n$  vertices is:
- (A)  $n$ . (B)  $\frac{n^2}{2}$ .  
(C)  $\frac{n(n-1)}{2}$ . (D)  $n(n-1)$ .
40. The data structure needed to implement recursion is:
- (A) Linked list. (B) Stack.  
(C) Queue. (D) Tree.
41. Connecting to Internet using modem and telephone line is called:
- (A) TCP/IP. (B) VSAT.  
(C) Routing. (D) Dia-up networking.
42. An application capable of displaying:
- (A) Server. (B) Client.  
(C) Browser. (D) Router.

43. CGI stands for :
- (A) Computer Graphics Input.     (B) Common Gateway Interface.  
(C) Common Graphics Interface.    (D) Computer Graphics Interface.
44. A network station that request service from a network server is called :
- (A) Client.    (B) Host.  
(C) Browser.    (D) Router.
45. The protocol used to reliably exchange e-mail between networks is :
- (A) HTTP.    (B) WWW.     (C) SMTP.    (D) PPP.
46. The unique address used to locate a web page is \_\_\_\_\_.
- (A) ISP.    (B) DNS.    (C) WWW.    (D) URL.
47. Linux is an example of a :
- (A) Word processing system.    (B) Operating system.  
(C) Database management system.    (D) Domain Name system.
48. ORACLE is a :
- (A) Database management system.    (B) Operating system.  
(C) Web server.    (D) Recently developed microprocessor.
49. Itanium is a :
- (A) Operating system.    (B) Microprocessor.  
(C) Unit of memory.    (D) Semiconductor element.
50. Parallel printers use :
- (A) Centronics interface.    (B) RS 232 C interface.  
(C) Serial interface.    (D) Gateway interface.
51. A device that converts the computer output to a form that can be transmitted over a telephone line is called :
- (A) Multiplexer.    (B) LAN card.  
(C) Router.     (D) Modem.
52. Relative to the output of a compiler, the output of an interpreter runs :
- (A) Faster.    (B) Slower.  
(C) At the same speed.    (D) May be faster or slower.

53. The clock signals are used in sequential logic circuits to ;
- (A) Tell the time of the day.
  - (B) Tell how much time has elapsed since the system was turned on.
  - (C) Carry serial data.
  - (D) Synchronise events in various parts of the system.
54. How many RAM chips of size 256 K × 1 bit are required to build 1 M byte of memory :
- (A) 4.
  - (B) 32.
  - (C) 24.
  - (D) 10.
55. The part of the system software, which under all circumstances, must reside in the main memory is :
- (A) Editor.
  - (B) Linker.
  - (C) Compiler.
  - (D) Loader.
56. Transmission mode used for data communication along telephone lines is :
- (A) Serial.
  - (B) Parallel.
  - (C) Hybrid.
  - (D) None of these.
57. An assembler that runs on one machine but produces machine code for another machine is called:
- (A) 1-pass assembler.
  - (B) 2-pass assembler.
  - (C) Cross assembler.
  - (D) Interpreter.
58. Which of the following is not a characteristic of relational database model ?
- (A) Tables.
  - (B) Tree like structure.
  - (C) Complex logical relationship.
  - (D) Records.
59. Which two files are used during the operation of DBMS?
- (A) Data dictionary and transaction log.
  - (B) Data dictionary and Query language.
  - (C) Query language and utilities.
  - (D) Data manipulation language and Query language.
60. The performance of pipelined processor suffers if :
- (A) The pipeline stages have unequal delays.
  - (B) Consecutive instructions are dependent on each other.
  - (C) The pipeline stages share hardware resources.
  - (D) All of these.

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61. The principle of 'locality of reference' justifies the use of :
- (A) DMA. (B) Disc memory.  
 (C) Cache memory. (D) Interleaved memory.
62. Which of the following is a feature of Associative memory ?
- (A) The address of the data is supplied by the user.  
(B) Slower than Random Access Memory.  
 (C) There is no need of address for accessing.  
(D) Data is accessed serially.
63. Which of the following is not an operating system ?
- (A) UNIX.  (B) Java.  
(C) LINUX. (D) Solaris.
64. Which of the following types of software should you often need to create, edit and print text documents ?
- (A) Word processing  (B) DBMS.  
(C) Spreadsheet. (D) Animation.
65. If you want to execute more than one program at a time, the operating system you are using must be capable of :
- (A) Word processing. (B) Linking.  
(C) Multiprocessing.  (D) Multitasking.
66. To avoid race condition, the number of processes that may be simultaneously inside their critical section is :
- (A) 0. (B) 1. (C) 2. (D) 4.
67. In which of the following storage placement strategies a program is placed in the largest available hole in the main memory ?
- (A) First fit. (B) Best fit.  
 (C) Worst fit. (D) Buddy.
68. In virtual memory :
- (A) There is no physical memory.  
(B) Programs must be smaller than the size of main memory.  
(C) All programs and data are stored in CD ROM.  
 (D) Logical address space and physical memory space are separated.

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69. Moving a process from main memory to disk is called :
- (A) Swapping. ✓ (B) Spooling.  
(C) Caching. (D) Scheduling.
70. Cryptography is used for :
- (A) Scheduling. (B) Security. ✓  
(C) Compression. (D) Database management.
71. Different computers are connected to a LAN by a cable and :
- (A) Modem. (B) Telephone line.  
(C) Interface card. ✓ (D) Special wires.
72. The network topology with highest reliability :
- (A) Bus. (B) Star.  
(C) Ring. (D) Mesh. ✓
73. The term 'band' means :
- (A) Number of bits transmitted/unit time.  
(B) Number of bytes transmitted/unit time.  
(C) Number of signal changes/unit time. ✓  
(D) None of the above.
74. Start and stop bits are used in serial communication for :
- (A) Error detection. (B) Error correction.  
(C) Synchronisation. ✓ (D) Routing.
75. ISDN stands for :
- (A) Indian Standards Data Network.  
(B) Integrated Services Digital Network. ✓  
(C) Integrated Services Data Network.  
(D) International Standards Digital Network.
76. In networking, the process the CPU asking each terminal whether it wants to send messages is called :
- (A) Querying. (B) Routing.  
(C) Mailing. (D) Polling. ✓

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77. A system program which translates and executes instruction simultaneously is known as :

- (A) Compiler. ✓ (B) Interpreter.  
(C) Assembler (D) Operating system.

78. BCD numbers express each digit as :

- (A) Nibble. (B) Byte.  
(C) Bit. (D) Decimal number.

79. A microprocessor with 20 address lines is capable of addressing \_\_\_\_\_ locations.

- (A) 20. (B) 1024. (C) 64 K. (D) 1 M.

80. Formatting of a floppy disc refers to :

- (A) Arranging the data on the disc in contiguous fashion.  
(B) Writing identification information on all tracks and sectors.  
(C) Erasing the system area.  
(D) Storing the operating system.

81. In programming, unrestricted use of 'goto' is harmful because it :

- (A) Makes debugging difficult. ✓ (B) Increases the execution time.  
(C) Increases memory requirement. (D) Generates longer code.

82. Running out of memory may occur due to :

- (A) Use of more variables. ✓ (B) Non-recursive function calls.  
(C) Recursive function calls. ✓ (D) None of the above.

83. An assembler is a :

- (A) Hardware.  
(B) Software. ✓  
(C) A person who assembles a computer.  
(D) A language.

84. Which of the following language is usually implemented with an interpreter ?

- (A) Pascal. (B) C.  
(C) C++. (D) BASIC.



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85. Which of the following languages is used for Artificial Intelligence applications ?  
(A) FORTRAN. (B) MATLAB.  
(C) PROLOG. (D) Java.
86. The language used to describe the format of web pages and links to other documents in the web :  
(A) Java. (B) HTML.  
(C) CGI. (D) HTTP.
87. A problem oriented language used by scientists and engineers to solve algebraic and differential equations :  
(A) Pascal. (B) LISP.  
(C) MATLAB. (D) COBOL.
88. A system program that sets up an executable program in memory ready for execution is :  
(A) Compiler. (B) Linker.  
(C) Interpreter. (D) Loader.
89. Search tables used by compilers, for efficient search, generally use :  
(A) Hash tables. (B) Linked list.  
(C) Binary search tree. (D) Linear list.
90. Which traversal of a binary search tree will give a sorted list ?  
(A) Preorder. (B) Inorder.  
(C) Post order. (D) Level-by-level.
91. Which of the following requires a device driver ?  
(A) Register memory. (B) Main memory.  
(C) Cache memory. (D) Disk memory.
92. In a 8085 microprocessor system with memory mapped I/O :  
(A) I/O devices have 8-bit addresses.  
(B) I/O devices are accessed using IN/OUT instructions.  
(C) Arithmetic operations can be performed directly with I/O data.  
(D) There can be maximum of 256 I/O devices.
93. The number of machine cycles in the execution of the instruction LDA 8000 by the 8085 microprocessor is :  
(A) 4. (B) 3. (C) 2. (D) 1.

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94. Advantage of memory interleaving is :
- (A) Memory capacity is increased.
  - (B) Memory cost is reduced.
  - (C) Effective memory speed is increased.
  - (D) A non-volatile memory is obtained.
95. Which of the following devices should get higher priority in assigning interrupts ?
- (A) Keyboard
  - (B) Hard disc drive
  - (C) Printer
  - (D) Screen
96. Integer division in C results in :
- (A) Rounding.
  - (B) Truncation.
  - (C) Overflow.
  - (D) Multiplication.
97. The variables which can be accessed by all modules are called :
- (A) Local.
  - (B) External.
  - (C) Internal.
  - (D) Global.
98. Arrays are passed as arguments to a function by :
- (A) Reference.
  - (B) Value.
  - (C) Structure.
  - (D) None of these.
99. The output of a compiler is :
- (A) Source code.
  - (B) Opcode.
  - (C) Object code.
  - (D) Bar code.
100. An operating system :
- (A) Is not required on large computers.
  - (B) Is always supplied with the computer.
  - (C) Is always written in assembly language.
  - (D) Consists of programs that help in the operation of the computer.