MCQ

ITE204-COMPUTER ARCHITECTURE AND ORGANIZATION

1. The average time required to reach a storage location in memory and obtain its contents is called the

   (A) seek time (B) turnaround time (C) access time (D) transfer time

   Answer : A

2. The idea of memory hierarchy is based
   (A) on the property of locality of reference (B) on the heuristic 90-10 rule (C) on the fact that references generally tend to cluster (D) all of the above

   Answer : A

3. Write Through technique is used in which memory for updating the data (A) Virtual memory (B) Main memory
   (C) Auxiliary memory (D) Cache memory

   Answer :D

4. what is the transfer rate for non random access memory? a) Tn=Ta+(N/R) b) Tn=Ta-(N/R) c) Tn=Ta*(N/R) d) none

   answer : A

5. Memory unit accessed by content is called
   (A) Read only memory (B) Programmable Memory (C) Virtual Memory (D) Associative Memory Answer :D
6. In a fixed point binary division algorithm, if E is equal to zero, what updation is done in Qn and A registers

   a) Qn=0, A=A+B, b) Qn=1,A=A-B
   c) Qn=NULL, A=A d) Qn=NUL,A=0

   answer : A

7. How to calculate the total capacity of the internal memory? a) Total memory= Number of words in memory * word length
   2. b) Total memory= Number of words in memory / word length
   3. c) Total memory= Number of words in memory - word length

   d) number of words+ word length. Answer: A

8. The performance of cache memory is frequently measured in terms of a quantity called a) hit ratio b) miss ratio

c) average ratio d) ratio
answer : A

9. The _____ that enables one to make a comparison of desired bit locations within a word for specific match and to do this for all words simultaneously .
a) Direct access b) indirect access
c) associative access d) random

answer : A

11. In DMA transfers, the required signals and addresses are given by the a) Processor

12.

13.

14.

b) Device drivers
c) DMA controllers d) The program itself Answer: C

After the complition of the DMA transfer the processor is notified by a) Acknowledge signal
b) Interrupt signal
c) WMFC signal

answer :B

The techinique whereby the DMA controller steals the access cycles of the processor to operate is called
a) Fast conning
b) Memory Con

c) Cycle stealing
d) Memory stealing

Answer:C

To overcome the conflict over the possession of the BUS we use _____ a) Optimizers
b) BUS arbitrators
c) Multiple BUS structure

Answer : B

15.

Which one of these is characteristic of RAID 5? a. Distributed parity
b. No Parity
c. All parity in a single disk
d. Double Parity

Answer : A

16. The Centralised BUS arbitration is similar to _____ interrupt circuit a) Priority

b) Parallel
c) Single
d) Daisy chain

Answer :D

17. Which of the following raid levels provides maximum usable disk space? a. RAID 1

    b. RAID 0 c. RAID 5 d. RAID 6

    Answer :B

18. An array of disks is more likely to fail compared to a single disk. How is it that RAID arrays still manage to provide more data protection compared to a single disk?
    a. Using either mirroring or striping
    b. Using either mirroring or parity

    c. Using better quality disks d. Using dedicated hardware

    Answer:B

19. Which level of RAID refers to disk mirroring with block striping? a) RAID level 1

    b) RAID level 2 c) RAID level 0 d) RAID level 3

Answer:A

20. Which two RAID types use parity for data protection? a. RAID 1

b. RAID 4
c. RAID 1+ 0 d. RAID 5

Answer: b,d

1. Consider the following sequence of micro–operations

Comprehensive Examinations- Computer Architecture

MBR ← PC MAR ← X
PC ←Y Memory ←MBR

Which one of the following is a possible operation performed by this sequence?
(A) Instruction fetch (B) Operand fetch (C) Conditional branch (D) Initiation of interrupt

service ANSWER: D

2. The load instruction is mostly used to designate a transfer from memory to a processor register known as____.

A. Accumulator B. Instruction Register
C. Program counter D. Memory address Register ANSWER: A

3. For computers based on three - address instruction formats, each address field can be used to specify which of the following:

S1: A memory operand
S2: A processor register
S3: An implied accumulator registers

(A) Either S1 or S2
(B) Either S2 or S3
(C) Only S2 and S3
(D) All of S1, S2 and S3 ANSWER: A

4. The addressing mode used in an instruction of the form ADD X Y, is _____.

A. Absolute B. indirect C. index D. none of these ANSWER: C

5. The effective address of the following instruction is , MUL 5(R1,R2) a) 5+R1+R2

b) 5+(R1*R2)
c) 5+[R1]+[R2] d) 5*([R1]+[R2])

ANSWER: C

6. When we use auto increment or auto decrement, which of the following is/are true 1) In both, the address is used to retrieve the operand and then the address gets altered.

2) In auto increment the operand is retrieved first and then the address altered.
3) Both of them can be used on general purpose registers as well as memory locations.

a) 1,2,3 b) 2

c) 1,3 d) 2,3

ANSWER: D

7. The load instruction is mostly used to designate a transfer from memory to a processor register known as____.

A. Accumulator B. Instruction Register
C. Program counter D. Memory address Register ANSWER: A

8. Logic X-OR operation of (4ACO)H & (B53F)H results _____.

A. AACB B. 0000 C. FFFF D. ABCD ANSWER: C

9. Generally Dynamic RAM is used as main memory in a computer system as it_____. A. Consumes less power B. has higher speed
C. has lower cell density D. needs refreshing circuitry
ANSWER: B

10. If the main memory is of 8K bytes and the cache memory is of 2K words. It uses associative mapping. Then each word of cache memory shall be_____.

A. 11 bits B. 21 bits C. 16 bits D. 20 bits ANSWER: C

11. A system uses 3 page frames for storing process pages in main memory. It uses the Least Recently Used (LRU) page replacement policy. Assume that all the page frames are initially empty. What is the total number of page faults that will occur while processing the

page reference string given below? 4, 7, 6, 1, 7, 6, 1, 2, 7, 2

A. 4 B. 6 C. 2 D. 7

ANSWER: B

12. A computer has a 256 KByte, 4-way set associative, write back data cache with block size of 32 Bytes. The processor sends 32 bit addresses to the cache controller.Each cache tag directory entry contains, in addition to address tag, 2 valid bits, 1 modified bit and 1 replacement bit.The size of the cache tag directory is

(A) 160 Kbits (B) 136 Kbits (C) 40 Kbits (D) 32 Kbits

ANSWER: A

13. Cache memory works on the principle of_____.

A. Locality of data . Locality of memory
C. Locality of reference D. Locality of reference & memory ANSWER: C

14. When process requests for a DMA transfer , a) Then the process is temporarily suspended b) The process continues execution
c) Another process gets executed

d) Both a and c ANSWER: D

15. In DMA transfers, the required signals and addresses are given by the a) Processor

b) Device drivers
c) DMA controllers d) The program itself

ANSWER: C

16. From amongst the following given scenarios determine the right one to justify interrupt mode of data transfer
i) Bulk transfer of several kilo-byte
ii) Moderately large data transfer of more than 1kb

iii) Short events like mouse action iv) Keyboard inputs
a) i and ii
b) ii

c) i,ii and iv d) iv

ANSWER: D
17. Which one of the following is true with regard to a CPU having a single interrupt request line and single interrupt grant line...??
i) Neither vectored nor multiple interrupting devices is possible.
ii) Vectored interrupts is not possible but multiple interrupting devices is possible. iii) Vectored interrupts is possible and multiple interrupting devices is not possible. iv) Both vectored and multiple interrupting devices is possible.
a) iii
b) i,iv
c) ii,iii
d) iii,iv

ANSWER: A

18. What is the unique characteristic of RAID 6 (Choose one)? a. Distributed Parity
b. Striping
c. Two independent distributed parity

d. Mirroring ANSWER: C

19. Which of the following combinations can support RAID 05? a. 2 sets with 3 disks each
b. 3 sets with 2 disks each
c. 4 sets with 3 disks each

d. 4 sets with 1 disk each

ANSWER: B AND C

20. The minimum duration of the active low interrupt pulse for being sensed without being lost must be

a) greater than one machine cycle b) equal to one machine cycle
c) greater than 2 machine cycles d) equal to 2 machine cycles

ANSWER: B

21. If two interrupts, of higher priority and lower priority occur simultaneously, then the service provided is for

a) interrupt of lower priority
b) interrupt of higher priority

c) both the interrupts
d) none of the mentioned

ANSWER: B

22. The data-in register of I/O port is
a) read by host to get input
b) read by controller to get input
c) written by host to send output
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ANSWER: A

23. Which one of the following connects high-speed high-bandwidth device to memory subsystem and CPU.
a) expansion bus
b) PCI bus

c) SCSI bus
d) none of the mentioned

ANSWER: A

24. _____ register keeps track of the instructions stored in program stored in

memory.
(A)AR (Address Register) (B) XR (Index Register) (C) PC (Program Counter) (D) AC (Accumulator)
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25. A group of bits that tell the computer to perform a specific operation is known as

(A) Instruction code (B) Micro-operation (C) Accumulator (D) Register ANSWER: A

26.In a computer architecture a BUS is _____ A. A collection of computers
B. A collection of wires
C. A collection of shared communication wires D. A software to transport data

ANSWER: C

27.A RAM chip has a capacity of 1024 words of 8 bits each (1K×8). The number of 2× 4 decoders with enable line needed to construct a 16K×16 RAM from1K×8 RAM is

A. 4

B. 5

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28.What is the minimum number of NAND gates required to implement a 2-input EXCLUSIVE-OR function without using any other logic gate?

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29.What are the states of the Auxiliary Carry (AC) and Carry Flag (CF) after executing the following 8085 program? MVI H, 5DH; MIV L, 6BH; MOV A, H; ADD L

A. AC=0 and CY=0

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ANSWER: C

30.Which of the following statement is false?

A. Virtual memory implements the translation of a program's address space into physical memory address space

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31.How many 8-bit characters can be transmitted per second over a 9600 baud serial communication link using asynchronous mode of transmission with one start bit, eight data bits, two stop bits, and one parity bit?

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C. 876
D. 1200 ANSWER: B

Course : Computer Architecture Addressing modes

1. Registers R1 and R2 of a computer contain the decimal values 1200 and 4600 respectively. What is the effective address of the memory operand for

the following instructions (i) Load 20(R1), R5
(ii) Subtract R1, R5

(A) 1220 and 5830 (C) 1200 and 4599

Ans: D

(B) 5830 and 4599 (D) 1220 and 1200

2. Which amongst the following refers to Absolute addressing mode
   (A) move R1, R2 (B) move LOC1, LOC2

   (C) move LOC1, R2 (D) move LOC2, R1 Ans: B

3. Computers use addressing mode techniques for _____.
   (A) Giving programming versatility to the user by providing facilities as pointers

to memory counters for loop control
(B) To reduce no. of bits in the field of instruction
(C) Specifying rules for modifying or interpreting address field of the instruction (D) All the above

Ans: D

4. Which of the following address modes calculate the effective address as address part of the instruction) + (content of CPU register)

(A) Direct Address Mode (B) Indirect Address mode.
(C) Relative address Mode. (D) Indexed address Mode.

Ans:C/D

5. A Program Counter contains a number 825 and address part of the instruction contains the number 24. The effective address in the relative address mode, when an instruction is read from the memory is

   (A) 849. (B) 850. (C) 801. (D) 802.

   Ans: B

6. In which addressing mode the operand is given explicitly in the instruction (A) Absolute. (B) Immediate.

   (C) Indirect. (D) Direct.

   Ans: B

7. Content of the program counter is added to the address part of the instruction in order to obtain the effective address is called.

   (A) relative address mode. (B) index addressing mode. (C) register mode. (D) implied mode.

   Ans: A

8. Word 20 contains 40

Word 30 contains 50
Word 40 contains 60
Word 50 contains 70
Which of the following instructions does not, load 60 into the Accumulator (A) Load immediate 60

(B) Load direct 30 (C) Load indirect 20 (D) both (A) & (C)

Von-Neumann architecture

9. Which of the following is not a part of instruction cycle?

(A) Fetch phase (B) Decode phase (C) Wait Phase (D) Execute phase

Ans: C

10. After fetching the instruction from the memory, the binary code of the instruction goes to

Ans: B

Ans: B

(A) Program counter. (C) Accumulator.

(B) Instruction registers. (D) Instruction pointer.

11. What is the content of Stack Pointer (SP)?
(A) Address of the current instruction

(B) Address of the next instruction

Ans: B

(C) Address of the top element of the stack (D) Size of the stack.

Ans: C

12. The address to the next instruction lies in

(A) Program Counter (C) Memory Buffer Register

Ans: A

(B) Instruction Register (D) Accumulator register

13. _____ register keeps track of the instructions stored in program stored in memory.

(A) AR (Address Register) (B) XR (Index Register)
(C) PC (Program Counter) (D) AC (Accumulator)

Ans: C

14. When an instruction is read from the memory, it is called (A) Memory Read cycle (B) Fetch cycle

(C) Instruction cycle

(D) Memory write cycle

15. What is the content of Stack Pointer (SP)?
(A) Address of the current instruction

Ans: C

(B) Address of the next instruction
(C) Address of the top element of the stack (D) Size of the stack.

Instruction formats

16. The following segment of instructions belong to ADD R1

MOV R1, R2 MUL R3 OUT 03H

1. (A) General Register Organization CPU
2. (B) Accumulator Type CPU
3. (C) Stack Type CPU
4. (D) information not sufficient to decide

Ans: A

17. A Stack-organized Computer uses instruction of
(A) Indirect addressing (B) Two-addressing

(C) Zero addressing (D) Index addressing

Ans: C

18. A group of bits that tell the computer to perform a specific operation is known as (A) Instruction code
(B) Micro-operation

(C) Accumulator (D) Register

Ans: A

19. MRI indicates
(A) Memory Reference Information.

(B) Memory Reference Instruction. (C) Memory Registers Instruction.

Ans: B

(D) Memory Register information

20. Zero address instruction format is used for (A) RISC architecture.

(B) CISC architecture.
(C) Von-Neuman architecture.

Ans: D

(D) Stack-organized architecture.

Instruction classifications

21. The load instruction is mostly used to designate a transfer from memory to a processor register known as

    (A) Accumulator (B) Instruction Register
    (C) Program counter (D) Memory address Register

Ans: A

22. The instructions which copy information from one location to another either in the processor's internal register set or in the external main memory are called

Ans: A

(A) Data transfer instructions. (B) Program control instructions. (C) Input-output instructions. (D) Logical instructions.

Main memory

23. Generally Dynamic RAM is used as main memory in a computer system as it (A) Consumes less power (B) has higher speed
(B) has lower cell density (D) needs refreshing circuitary

Ans:

24. Dynamic RAM consumes _____ Power and _____ then the Static RAM. (A)more, faster (B) more, slower

(A) less, slower (D) less, faster Ans.

25. Which of the memory holds the information when the Power Supply is switched off? (A)Static RAM (B) Dynamic RAM

(C) EEROM (D) None of the above

Ans.

26. Which of the memory holds the information when the Power Supply is switched off?

1. Static RAM
2. Dynamic RAM
3. EEROM
4. None of the above

Ans:

27. Information is written to the ____ chips by the manufacturer and this information cannot be changed.

1. SROM
2. Shadow RAM
3. DRAM
4. ROM

Ans:

28. An ____ chip is a special ROM chip that the manufacturer can reprogram by using a speacil programming device that uses ultraviolet light.

A. DDRAM B. ROM
C. EPROM D. VRAM

Ans:

29. You can update the software on the ____ by running a speacil software setup program provided by the manufacturer.

Ans:

A. EEPROM B. POST
C. EPROM D. BIOS

30. What characteristic of RAM memory makes it not suitable for permanent storage? (A) too slow (B) unreliable

(C) it is volatile (D) too bulky

Ans:

31. The access method used for magnetic tape is_____
a) Direct b) Random c) Sequential d) None of the above

Cache memory

(B) RAM and ROM
(D) None of these

32. Cache memory sits between (A) CPU and RAM

(D) CPU and Hard Disk

Ans:

33. The idea of cache memory is based
(A) on the property of locality of reference

(B) on the heuristic 90-10 rule
(C) on the fact that references generally tend to cluster (D) all of the above

Ans:

34. Write Through technique is used in which memory for updating the data (A) Virtual memory (C) Main memory

(B) Auxiliary memory (D) Cache memory

Ans:

35. What is called the configuration where when the CPU stores a data on the memory cache this data isn't immediately written to the RAM?

1. Write Back
2. Write Through
3. Write Out
4. Write In

E. None of the above Ans:

36. When the CPU needs a certain data and it is not loaded in the memory cache and the CPU needs to load this data directly from RAM we say that there was a:

1. Transmission delay
2. Rotational delay
3. Cache hit
4. Cache miss
5. None of the above

Ans:

37. Which cache mapping function does not require a replacement algorithm?

1. Direct mapping
2. Set associative mapping
3. Fully associative mapping

Ans:

38. Cache memory works on the principle of (A) Locality of data.

(B) Locality of reference (C) Locality of memory

(C) Locality of reference & memory

Ans.

39. Which of the following memories has the shortest access times?

D. RAM Ans:

40. Which is the fastest cache mapping function?

1. Direct mapping
2. Set associative mapping
3. Fully associative mapping

Ans:

1. Cache memory
2. Magnetic bubble memory

C. Magnetic core memory

41. The performance of cache memory is frequently measured in terms of a quantity called

1. Miss ratio. (B) Hit ratio.
2. Latency ratio. (D) Read ratio.

Ans:

42. The method for updating the main memory as soon as a word is removed from the Cache is called

1. Write-through
2. write-back
3. protected write
4. cache-write

Ans:

43. How many different addresses are required by the memory that contain 16K words? (A)16,380 (B) 16,382

(C)16,384 (D) 16,386

Ans:

44. Which cache write mechanism allows an updated memory location in the cache to remain out of date in memory until the block containing the updated memory location is replaced in the cache?

Ans:

1. Write through
2. Write back

C. Both
D. Neither

45. In a virtual memory system, the addresses used by the programmer belongs to (A) memory space. (C) physical addresses.

(B) address space. (D) main memory address.

Ans:

46. A page fault

Virtual memory

Ans:

(A) Occurs when there is an error in a specific page.
(B) Occurs when a program accesses a page of main memory.

(C) Occurs when a program accesses a page not currently in main memory. (D) Occurs when a program accesses a page belonging to another program.

I/O devices; I/O fundamentals, DMA

47. Which disk is one of the important I/O devices and its most commonly used as permanent storage devices in any processor:
(A) Hard disk
(B) Optical disk

(C) Magneto disk
(D) Magneto Optical disk ANS:

48. A monitor consists of : (A) ARU

(B) BRT (C) CRT (D) ARU ANS:

49. LCD stands for:
(A) Liquid crystal display (B) Liquid catalog display (C) Liquid crystal data (D) Liquid code display ANS:

50. Printer is a:

1. (A) Hardcopy
2. (B) Softcopy
3. (C) Both a & b
4. (D) None of these

ANS:

51. _____interface is an entity that controls data transfer from external device, main memory and or CPU registers:

    (A) I/O interface
    (B) CPU interface (C) Input interface (D) Output interface ANS:

52. To resolve problems of I/O devices there is a special hardware component between CPU and_____ to supervise and synchronize all input output transfers:
    (A) Software
    (B) Hardware

(C) Peripheral
(D) None of these ANS:

53. I/O modules are designed with aims to: (A) Achieve device independence
(B) Handle errors
(C) Speed up transfer of data

(D) Handle deadlocks
(E) Enable multi-user systems to use dedicated device (F) All of these
ANS:

54. In devices 2 status reporting signals are:
    1. (A) BUSY
    2. (B) READY
    3. (C) Both a & b
    4. (D) None of these
55. _____is a single address space for storing both memory and I/O devices: (A) Memory-mapped I/O
(B) Isolated I/O
(C) Separate I/O

(D) Optimum I/O

56. Following are the disadvantages of memory-mapped I/O are:
(A) Valuable memory address space used up
(B) I/O module register treated as memory addresses
(C) Same machine intersection used to access both memory and I/O device (D) All of these

57. Two ways in which computer buses can communicate with memory in case of I/O devices by using:
(A) Separate buses for memory and I/O device
(B) Common bus for memory and I/O device
(C) both a & b

(D) none of these

58. There are 2 ways in which addressing can be done in memory and I/O device: (A) Isolated I/O

(B) Memory-mapped I/O (C) Both a & b
(D) None of these

59. I/O module must recognize a_____ address for each peripheral it controls: (A) Long

(B) Same (C) Unique (D) Bigger

60. Each interaction b/w CPU and I/O module involves: (A) Bus arbitration

(B) Bus revolution (C) Data bus
(D) Control signals

61. Which are 4 types of commands received by an interface: (A) Control, status, data output, data input
(B) Only data input
(C) Control, flag, data output, address arbitration

(D) Data input, data output, status bit, decoder

62. 2 control lines in I/O interface is: (A) RD, WR

(B) RD,DATA
(C) WR, DATA (D) RD, MEMORY

63. If CPU and I/O interface share a common bus than transfer of data b/w 2 units is said to be: (A) Synchronous

(B) Asynchronous (C) Clock dependent

(D) Decoder independent

64. _____is a single control line that informs destination unit that a valid is available on the bus:
(E) Strobe

(F) Handshaking (G) Synchronous (H) Asynchronous

65. What is disadvantage of strobe scheme:
(E) No surety that destination received data before source removes it

(F) Destination unit transfer without knowing whether source placed data on data bus (G) Can't said
(H) Both a & b

66. In_____ technique has 1 or more control signal for acknowledgement that is used for intimation:
    1. (A) Handshaking
    2. (B) Strobe
    3. (C) Both a & b
    4. (D) None of these
67. Modes of transfer b/w computer and I/O device are: (A) Programmed I/O

    (B) Interrupt-initiated I/O (C) DMA
    (D) All of these

68. _____operations are the results of I/O operations that are written in the computer program: (A) Programmed I/O

    (B) DMA
    (C) Handshaking (D) Strobe

69. _____is a dedicated processor that combines interface unit and DMA as one unit: (A) Input-Output Processor

(B) Only input processor
(C) Only output processor

(D) None of these

70. _____is a special purpose dedicated processor that is designed specially designed for data transfer in network:

(A) Data Processor
(B) Data Communication Processor (C) DMA Processor
(D) Interrupt Processor

71. _____processor has to check continuously till device becomes ready for transferring the data:
(A) Interrupt-initiated I/O
(B) DMA
(C) IOP

(D) DCP

72. Interrupt-driven I/O data transfer technique is based on_____ concept:
    1. (A) On demand processing
    2. (B) Off demand processing
    3. (C) Both a & b
    4. (D) None of these
73. Which technique helps processor to run a program concurrently with I/O operations: (A) Interrupt driven I/O

(B) DMA (C) IOP (D) DCP

74. PSW is saved in stack when there is a (A) Interrupt recognized

(B) Execution of RST instruction (C) Execution of CALL instruction (D) All of these

Ans: A

75. When CPU is executing a Program that is part of the Operating System, it is said to be in (A) Interrupt mode (B) System mode

(C) Half mode (D) Simplex mode

Interrupts

Ans: B

76. What is a trap?
(A) External interrupt

(C) Software Interrupt Ans: B

77. 3 types of exceptions are: (A) Interrupts

    (B) Traps
    (C) System calls (D) All of these

(B) Internal Interrupt. (D) Error

78. Which exception is also called software interrupt: (A) Interrupt

    (B) System calls (C) Traps
    (D) All of these

79. User programs interact with I/O devices through: (A) Operating system

    (B) Hardware
    (C) Cpu
    (D) Microprocessor

80. Which table handle store address of interrupt handling subroutine: (A) Interrupt vector table
    (B) Vector table
    (C) Symbol link table

    (D) None of these

81. Which technique is used that identifies the highest priority resource by means of software: (A) Daisy chaining

    (B) Polling (C) Priority (D) Chaining

82. _____interrupt establishes a priority over the various sources to determine which request should be entertained first:

(A) Priority interrupt (B) Polling
(C) Daisy chaining (D) None of these

83. _____method is used to establish priority by serially connecting all devices that request an interrupt:

    (A) Polling
    (B) Daisy chaining (C) Priority
    (D) None of these

84. In daisy chaining device 0 will pass signal only if it has:
    1. (A) Interrupt request
    2. (B) No interrupt request
    3. (C) Both a & b
    4. (D) None of these
85. VAD stands for:
    (A) Vector address

(B) Symbol address (C) Link address (D) None of these

86. _____interrupt method uses a register whose bits are set separately by interrupt signal for each device:
    1. (A) Parallel priority interrupt
    2. (B) Serial priority interrupt
    3. (C) Both a & b
    4. (D) None of these
87. _____register is used whose purpose is to control status of each interrupt request in parallel priority interrupt:

    (A) Mass (B) Mark (C) Make (D) Mask

88. The ANDed output of bits of interrupt register and mask register are set as input of: (A) Priority decoder

    (B) Priority encoder (C) Priority decoder (D) Multiplexer

89. Which 2 output bits of priority encoder are the part of vector address for each interrupt source in parallel priority interrupt:

1. (A) A0 and A1
2. (B) A0 and A2
3. (C) A0 and A3
4. (D) A1 and A2

90. What
    1. (A) Tell data bus which device is to entertained and stored in VAD
    2. (B) Tell subroutine which device is to entertained and stored in VAD
    3. (C) Tell subroutine which device is to entertained and stored in SAD
    4. (D) Tell program which device is to entertained and stored in VAD
91. When CPU invokes a subroutine it performs following functions:
    1. (A) Pushes updated PC content(return address) on stack
    2. (B) Loads PC with starting address of subroutine
    3. (C) Loads PC with starting address of ALU
    4. (D) Both a & b
92. Which two RAID types use parity for data protection? a. RAID 1

    b. RAID 4
    c. RAID 1+ 0 d. RAID 5

93. 3. Which one of these is characteristic of RAID 5? a. Distributed parity
    b. No Parity
    c. All parity in a single disk

    d. Double Parity

94. 4. What is the unique characteristic of RAID 6 (Choose one)? a. Distributed Parity
    b. Striping
    c. Two independent distributed parity

d. Mirroring

95. 5. Which of the following combinations can support RAID 05? a. 2 sets with 3 disks each
    b. 3 sets with 2 disks each

is the purpose of A0 and A1 output bits of priority encoder in parallel priority:

c. 4 sets with 3 disks each d. 4 sets with 1 disk each

96. 6. What is the minimum number of disks required for RAID1? a. 1

    b. 2 c. 4 d. 5

97. Which of the following raid levels provides maximum usable disk space? a. RAID 1

    b. RAID 0 c. RAID 5 d. RAID 6

98. An array of disks is more likely to fail compared to a single disk. How is it that RAID arrays still manage to provide more data protection compared to a single disk?
    a. Using either mirroring or striping
    b. Using either mirroring or parity

    c. Using better quality disks d. Using dedicated hardware

Data Structures and Algorithms

1. In a min-heap:
A - parent nodes have values greater than or equal to their children

B - parent nodes have values less than or equal to their children

C - both statements are true
D - both statements are wrong
2 - Minimum number of moves required to solve a Tower of Hanoi puzzle is A - 2 n^ 2
B – 2^ n-1
C – 2^ n - 1
D - 2n – 1
3. Which of the following asymptotic notation is the worst among all?
A - On + 9378
B - O(n ^3)

C – n^O1
D – 2^On
4.Maximum degree of any vertex in a simple graph of vertices n is A - 2n - 1
B-n
C-n+1

D-n–1
5.Which of the following algorithm is not stable? A - Bubble Sort

B - Quick Sort C - Merge Sort

D - Insertion Sort

6.Which of the following is example of in-place algorithm? A - Bubble Sort
B - Merge Sort
C - Insertion Sort

D - All of the above
7.After each iteration in bubble sort
A - at least one element is at its sorted position.
B - one less comparison is made in the next iteration.
C - Both A & B are true.
D - Neither A or B are true
8. Time required to merge two sorted lists of size m and n, is A - Om| n
B - Om + n

C - Omlogn D – Onlogm

9.If queue is implemented using arrays, what would be the worst run time complexity of enqueue and dequeue operations?

A - On, On
B - On, O1
C - O1, On
D - O1, O1
10. What happens when you push a new node onto a stack?

A. The new node is placed at the front of the linked list B. The new node is placed at the back of the linked list C. The new node is placed at the middle of the linked list D. No Changes happens

11. A queue in which insertion and deletion takes places from any position is called ..... A. circular queue

B. random of queue

C. priority

D. dequeue
12. In Binary trees nodes with no successor are called .....

A. End nodes

B. Terminal nodes

C. Final nodes

D. Last nodes
13. The depth of complete binary tree is given by .....

A. Dn = n log2n B. Dn= n log2n+1 C. Dn = log2n

D. Dn = log2n+1
14. The post order traversal of binary tree is DEBFCA. Find out the pre order traversal. A. ABFCDE
B. ADBFEC
C. ABDECF
D. ABDCEF
15. If every node u in G adjacent to every other node v in G, A graph is said to be
A. isolated
B. complete
C. finite
D. strongly connected

16. If CurrNode pointer points to the previous node in the list and NewNode points to the newly created Node, the address assignments to be done for inserting a node in the middle of a singly linked list is

a. CurrNode->Next = NewNode; NewNode->Next = CurrNode->Next b. NewNode->Next = CurrNode->Next; CurrNode->Next = NewNode; c. CurrNode->Next = NewNode->Next; NewNode->Next = CurrNode; d. CurrNode = NewNode

17. Identify the sorting technique that supports divide and conquer strategy and has (n2) complexity in worst case

a. Insertion b. Shell

c. Merge
d. Quick
18. The run time of the following algorithm is Procedure A(n)
If(n<=2) return(1)
Else return(A(sqrt(n))
a)O(n)

b) O(logn)
c) O(loglogn)
d) O(1)
19. For non-negative functions, f(n) and g(n), f(n) is theta of g(n) if and only if

1. f(n) = O(g(n)) and f(n) = Ω(g(n))
2. f(n) = O(g(n)) and f(n) = o((g(n))
3. f(n) = O(g(n)) and f(n) = ω (g(n))
4. f(n) = Q(g(n)) and f(n) = Ω(g(n))

20. The degree of a leaf node is: a: 1

b: 0

c: -1 d:2

Answers:

1. B 2. C 3. D 4. D 5. B 6. B 7. C 8. B 9. D 10. A 11. C 12. B 13. D 14. A 15. B 16. B 17. D 18. B 19. A 20. B

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b: 0 c: -1 d:2

Answers:

1. B 2. C 3. D 4. D 5. B 6. B 7. C 8. B 9. D 10. A 11. C 12. B 13. D

14. A 15. B 16. B 17. D 18. B 19. A 20. B

Data Structures and Algorithms

1. Which among the following is not a linear data structure? a) Graphs b) Linked lists c) Circular linked lists d) Arrays

Answer: A

2. For the given infix expression a+b^c*(d-e) where '^' denotes the EX-OR operator, the corresponding prefix expression is

a) -+a^b*cde b) +a*^bc-de c) ^+ab*c-de d) +-a^bc*de

Answer : C

3. Which of the following is termed as reverse polish notation?
a) Big-O notation b) Little-Oh notation c) Prefix notation d) Postfix Notation

Answer: D

4. What does the code snippet given below do?

```
void fun1(struct node* head) {

if(head == NULL) return;

fun1(head->next);

printf("%d ", head->data); }
```

a) Prints all nodes of linked lists
b)Prints all nodes of linked list in reverse order c)Prints alternate nodes of Linked List
d)Prints alternate nodes in reverse order

Answer: B

5. Given the following structure template, choose the correct syntax for accessing the 5^{th} subject marks of the 3^{rd} student.

```
struct stud

{
int marks[6];

char sname[20];

char rno[10]; }s[10];
```

a) stud[2].marks[4] b) stud[4].marks[2] c) s[2].marks[4] d) s[4].marks[2]

Answer: C

6. What is the postfix expression for the following infix expression? Infix = a+b%c>d

a) abcd>%+ b) abc%d>+ c) ab+c%d> d) abc%+d>

Answer: D

7. Among the following which is not the application of a stack?
a) Postponing data usage b) Job scheduling c) Backtracking d) none

Answer: B

8. Which of the following is not correct to create an integer array of size 20?

1. a) int *a= (int*) malloc(20*sizeof(int)) ;
2. b) int *a= (int*) malloc(80) ;
3. c) int x; int *a= (int*) malloc(20*sizeof(x)) ;
4. d) All are correct

Answer: D

9. If a , b , c, are three nodes connected in sequence in a singly linked list

struct node *temp=a;

while(temp!=NULL) {

temp=temp->next; printf("$");
}Assuming 'c' to be the last node, the output is

a) $$$ b) $$ c) NULL d) error

Answer: A

10. You are given pointers to first and last nodes of a singly linked list, which of the following operations are dependent on the length of the linked list?
a) Delete the first element
b) Insert a new element as a first element

c) Delete the last element of the list

d) Add a new element at the end of the list

Answer: C

11. On adopting shell sort technique, the output of the array pass with increment size =3, is

a) 930142125778062 b) 925142130778062 c) 914212530627780 d) the same array

Answer: B

(21,62,14,9,30,77,80,25) after a

12. Consider a dynamic queue with two pointers: front and rear. What is the time needed to insert an element in a queue of length of n?

a) O(log2n) b) O(n). c) O(1). d) O(n log2n).

Answer: C

13. If a , b , c, are three nodes connected in sequence in a singly linked list, what is the statement to be added to change this into a circular linked list?

a) a->next=b b) b->next=c c) c->next=a d) all

Answer: C

14. In which of the following hashing methods, the below expression is used to find the home address, given a 6-digit number as the key.

Sum=key%100+(key/100)%100+(key/10000).

a) Modulo division b) Key offset c) Pseudo random d) Fold shift

Answer: D

15. Which sorting technique uses a data structure similar to the one used in bucket hashing? a) Quick b) Merge c) Heap d) Radix

Answer: D

16. For the array (77 ,62,114,80,9,30,99), write the order of the elements after two passes using the Radix sort.

a) 80306211477999 b) 114306277999

c) 91143062778099 d) 93062778099114

Answer: C

17. Which of these is asymptotically bigger?
a) $79n^2+43n$ b) $65n^3+34n$ c) $6*2^n$ d) none

Answer: C

18. If a[ ] is the array containing the elements to be sorted using radix sort, during the first iteration in which the LSD is considered, row number in 2D array to which an element has to be stored is given by

a) a[i]/10%10 b) a[i]%10/10 c) a[i]%10 d) a[i]/100%10

Answer: C

19. temp=root->left;

while(temp->right!=NULL) temp=temp->right; return temp;

The above code snippet for a BST with the address of the root node in pointer ‘root’ returns

a) Inorder successor of the root
b) Maximum element in the right subtree of root c) Both a and b
d) Inorder predecessor of the root

Answer: D

20. For a tree which has no right subtree, if the inorder sequence is DBEA, its preorder sequence cannot be
a) ABDE b) BADE c) AEBD D) ABED
Answer: B

1. When determining the efficiency of algorithm, the space factor is measured by

1. Counting the maximum memory needed by the algorithm
2. Counting the minimum memory needed by the algorithm
3. Counting the average memory needed by the algorithm
4. Counting the maximum disk space needed by the algorithm

Answer a.
2. The complexity of Bubble sort algorithm is

1. O(n)
2. O(log n)
3. O(n2)
4. O(n log n)

Answer b

3. Linked lists are best suited

1. for relatively permanent collections of data
2. for the size of the structure and the data in the structure are

constantly changing

c. for both of above situation

d. for none of above situation

Answer b

4. If the values of a variable in one module is indirectly changed by another module, this situation is called

1. internal change
2. inter-module change
3. side effect
4. side-module update

Answer c

5. In linear search algorithm the Worst case occurs when

1. The item is somewhere in the middle of the array
2. The item is not in the array at all
3. The item is the last element in the array
4. The item is the last element in the array or is not there at all

Answer d

6. For an algorithm the complexity of the average case is

1. Much more complicated to analyze than that of worst case
2. Much more simpler to analyze than that of worst case

c. Sometimes more complicated and some other times simpler than that of worst case

d. None or above

Answer a

7. The complexity of merge sort algorithm is

1. O(n)
2. O(log n)
3. O(n2)
4. O(n log n)

Answer d

8. The complexity of linear search algorithm is

1. O(n)
2. O(log n)
3. O(n2)
4. O(n log n)

Answer a

9. When determining the efficiency of algorithm the time factor is measured by

a. Counting microseconds

2. Counting the number of key operations
3. Counting the number of statements
4. Counting the kilobytes of algorithm

Answer b

10. Which of the following data structure is linear data structure?

1. Trees
2. Graphs
3. Arrays
4. None of above

Answer c

11. The elements of an array are stored successively in memory cells because

a. by this way computer can keep track only the address of the first element and the addresses of other elements can be calculated

b. the architecture of computer memory does not allow arrays to store other than serially

c. both of above d. none of above Answer a

12. Which of the following data structure is not linear data structure?

1. Arrays
2. Linked lists
3. Both of above
4. None of above

Answer d
13. The Average case occur in linear search algorithm

1. When Item is somewhere in the middle of the array
2. When Item is not in the array at all
3. When Item is the last element in the array
4. When Item is the last element in the array or is not there at all

Answer a
14. Two main measures for the efficiency of an algorithm are

1. Processor and memory
2. Complexity and capacity
3. Time and space
4. Data and space

Answer c

15. Finding the location of the element with a given value is:

1. Traversal
2. Search
3. Sort
4. None of above

Answer b

16. Which of the following case does not exist in complexity theory

1. Best case
2. Worst case
3. Average case
4. Null case

Answer d

17. The operation of processing each element in the list is known as

1. Sorting
2. Merging
3. Inserting
4. Traversal

Answer d

18.

a.

Arrays are best data structures

for relatively permanent collections of data

b.
constantly changing

for the size of the structure and the data in the structure are

c. for both of above situation

d. for none of above situation

Answer a

19. 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

Answer c
20. The complexity of Binary search algorithm is

1. O(n)
2. O(log)

3. O(n2)

d. O(n log n)

Answer b

21. Which if the following is/are the levels of implementation of data structure

A) Abstract level

B) Application level

C) Implementation level

D) All of the above

Answer D

22. A binary search tree whose left subtree and right subtree differ in hight by at most 1 unit is called .....

A) AVL tree

B) Red-black tree

C) Lemma tree

D) None of the above

Answer A

23. ..... level is where the model becomes compatible executable code

A) Abstract level

B) Application level

C) Implementation level

D) All of the above

Answer C

24. Stack is also called as

A) Last in first out

B) First in last out

C) Last in last out

D) First in first out

Answer A

25. Which of the following is true about the characteristics of abstract data types?

i) It exports a type.

ii) It exports a set of operations

A) True, False

B) False, True

C) True, True

D) False, False

Answer C

26. ..... is not the component of data structure.

A) Operations

B) Storage Structures

C) Algorithms

D) None of above

Answer D

27. Which of the following is not the part of ADT description?

A) Data

B) Operations

C) Both of the above

D) None of the above

Answer D

28. Inserting an item into the stack when stack is not full is called ..... Operation and deletion of item form the stack, when stack is not empty is called .....operation.

A) push, pop

B) pop, push

C) insert, delete

D) delete, insert

Answer A

29. ..... Is a pile in which items are added at one end and removed from the other.

A) Stack

B) Queue

C) List

D) None of the above

Answer B

30. ..... is very useful in situation when data have to stored and

then retrieved in reverse order.

A) Stack

B) Queue

C) List

D) Link list

Answer A

31. Which data structure allows deleting data elements from and inserting at rear?

A) Stacks

B) Queues

C) Dequeues

D) Binary search tree

Answer B

32. Which of the following data structure can't store the non- homogeneous data elements?

A) Arrays

B) Records

C) Pointers

D) Stacks

Answer A

33. A ..... is a data structure that organizes data similar to a line in the supermarket, where the first one in line is the first one out.

A) Queue linked list

B) Stacks linked list

C) Both of them

D) Neither of them

Answer A

34. Which of the following is non-liner data structure?

A) Stacks

B) List

C) Strings

D) Trees

Answer D

35. Herder node is used as sentinel in .....

A) Graphs

B) Stacks

C) Binary tree

D) Queues

Answer C

36. Which data structure is used in breadth first search of a graph to hold nodes?

A) Stack

B) queue

C) Tree

D) Array

Answer B

37. Identify the data structure which allows deletions at both ends of the list but insertion at only one end.

A) Input restricted dequeue

B) Output restricted qequeue

C) Priority queues

D) Stack

Answer A

38. Which of the following data structure is non linear type?

A) Strings

B) Lists

C) Stacks

D) Graph

Answer D

39. Which of the following data structure is linear type?

A) Graph

B) Trees

C) Binary tree

D) Stack

Answer D

40. To represent hierarchical relationship between elements, Which data structure is suitable?

A) Dequeue

B) Priority

C) Tree

D) Graph

Answer C

41. The complexity of Bubble sort algorithm is

A. O(n)
B. O(log n) C. O(n2)
D. O(n log n)

Answer B

42. The data structure required to evaluate a postfix expression is

A. queue
B. stack
C. array
D. linked-list

Answer C

43. The indirect change of the values of a variable in one module by another module is called

A. internal change
B. inter-module change C. side effect
D. side-module update

Answer B

44. The process of accessing data stored in a serial access memory is similar to manipulating data on a

A. heap
B. queue
C. stack
D. binary tree

Answer B

45. Which of the following data structure is linear data structure?

A. Trees
B. Graphs
C. Arrays
D. None of above
Answer C
46. The operation of processing each element in the list is known as

A. Sorting

B. Merging C. Inserting D. Traversal

Answer C

47. Finding the location of the element with a given value is:

A. Traversal
B. Search
C. Sort
D. None of above

Answer D

48. A BST is traversed in the following order recursively: Right, root, left

The output sequence will be in

A. Ascending order B. Descending order

C. Bitomic sequence D. No specific order

Answer B

49. Linked lists are best suited

A. for relatively permanent collections of data

B. for the size of the structure and the data in the structure are constantly changing

C. for both of above situation D. for none of above situation

Answer B

50. Each array declaration need not give, implicitly or explicitly, the information about

A. the name of array
B. the data type of array
C. the first data from the set to be stored

D. the index set of the array

Answer B

ITE302 - Database Systems / Comprehensive Exam Quesions

1. Assume that a table R with 1000 records is to be joined with another table S with 10000 records. What is the maximum number of records that would result in if we join R with S and the equi-join attribute of S is the primary key?	
(a) 1,000	(b) 10,000
(c) 1,00,00,000	(d) 11,000
2. Consider a schedule S1 given below; R1(A); W1(A); R2(B); R2(A); R1(B); W2(A+B); W1(B); where R1 and W1 are read and write operations of transaction T1 and R2 and W2 are read and write operations of transaction T2. Which of the following is correct regarding schedule S1?	
(a) S1 is a serializable schedule	(b) A deadlock will occur if 2PL is used
(c) S1 is a conflict serializable schedule	(d) S1 is a view serializable schedule
3. Consider a relation R (A, B). If A → B is a trivial functional dependency and A is the super key for R, then what is the maximum normal form R can be in?	
(a) 3NF	(b) 2NF
(c) BCNF	(d) 1NF
4. Which of the following is a disadvantage of file processing system? (I) Efficiency of high level programming, (II) Data Isolation (III) Integrity issues (IV) Storing of records as files	
(a) I only	(b) III only
(c) II and III only	(d) II and IV only
5. The data manipulation language used in SQL is a, (I) Procedural DML (II) Non-Procedural DML (III) Modification DML (IV) Declarative DML	
(a) I and II only	(b) III and IV only
(c) II and IV only	(d) I and IV only
6. Which of the following is not a function of a DBA?	
(a) Table creation	(b) Index creation
(c) User creation	(d) Application creation

7. Assume a relation R with keys X, Y and Z, where X, Y, and Z are sets of one or more attributes. Also assume that Y is a subset or equal to X and Z is a subset of X and Y. Which of the following is true for this case?

(a) X and Y are candidate keys of R	(b) Y and Z are the candidate keys of R
(c) X is the only candidate key of R	(d) Z is the only candidate key of R

8. Assume relations R and S with the schemas R (A, B, C) and S (B, D). Which of the following is equivalent to r ⋈ s?

(a)σr.B=s.B (r⋈ s)	(b) ∏r.A, r.B, r.C, s.D (σr.B = s.B (r x s))
(c) ∏r.A, r.B, s.B, r.C, s.D (σr.B = s.B (r x s))	(d) ∏r.A, r.B, s.B, r.C, s.D (σr.B = s.B (r ⋈ s))

9. Consider a relational table with the schema R (A, B, C). Assume that the cardinality of attribute A is 10, B is 20, and C is 5. What is the maximum number of records R can have without duplicate?

(a) 35	(b) 100
(c) 1000	(d) 200

10. Which of the following operator in SQL would produce the following result if applied between two relations Employee and Department?

Eno	EName	DeptNo	DName
111	Kumar	100	Sales
222	Steve	200	Finance
Null	Null	300	Admn
244	Meera	400	Mktg

(a) Outer Join	(b) Natural Join
(c) Cartesian Join	(d) Projection Join

11. Consider the schedules given below. All of them involving at least three transactions. The read operation on a data item x is represented as $r_i(x)$ and a write operation is represented as $w_i(x)$ where i is the transaction number. Which one of them is conflict serializable?

(a) $r_2(x)$, $r_1(x)$, $w_2(x)$, $r_3(x)$, $w_1(x)$	(b) $r_2(x)$, $w_2(x)$, $r_3(x)$, $r_1(x)$, $w_1(x)$
(c) $r_1(x)$, $r_2(x)$, $w_1(x)$, $r_3(x)$, $w_2(x)$	(d) $r_3(x)$, $r_2(x)$, $r_1(x)$, $w_2(x)$, $w_1(x)$

12. Consider a disk with following specification; sector size - 512 bytes, tracks per surface - 2000, sectors per track - 60, double-sided platters - 4, and average seek time - 20 msec. For a 5400 rpm hard disk for one revolution, if a single track of data can be transferred, then what is the transfer rate?

(a) 2727 Kbytes/second	(b) 2020 Kbytes/second
(c) 5400 Kbytes/second	(d) 2048 Kbytes/second

13. Assume that a table CUSTOMER has 10000 records. If the block size 1024 bytes and the record size is 80 bytes, how many records can be stored in each block to achieve maximum performance and how many blocks are required to store the entire table?

(a) 12, 834	(b) 13, 833
(c) 24, 834	(d) 23, 833

14. Consider a relation R (A, B, C, D, E) with set of functional dependencies F = {A→BC, CD→E, B→D, E→A}. Which of the following is one of the candidate keys of R?

(a) ABC	(b) B
(c) E	(d) ED

15. Given R = ABCDEFGH and set of functional dependencies F = {BH→C, BH→F, E→F, A→D, F→A, BH→E, C→E, F→D}, which of the following is redundant set of functional dependencies?

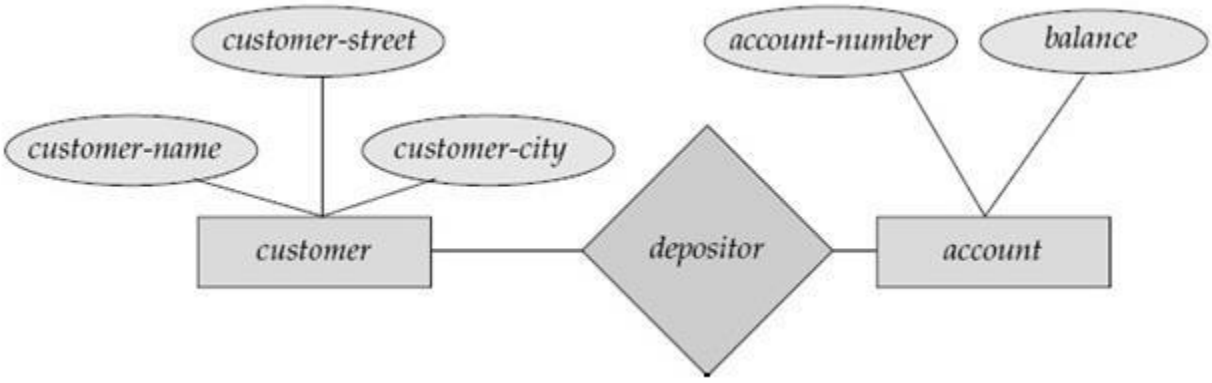
(a) BH→C, F→D, F→A	(b) BH→C, F→D, BH→E
(c) BH→E, A→D, F→D	(d) BH→C, A→D, BH→E

16. Assume a relation ACCOUNT (acno, balance, type, branch, last_accessed) with 1 million records. If a SQL query "SELECT balance FROM account WHERE balance>5000" would produce 800000 records, which one of the following is the optimized version of relational algebra expressions that is equivalent to the given SQL query?

(a) σbalance (Πbalance>5000 (account))	(b) σbalance>5000 (Πbalance (account))
(c) Πbalance (σbalance<5000 (account))	(d) Πbalance>5000 (σbalance (account))

17. Consider the ER diagram given below;

If depositor is a one-to-many relationship from account to customer, then this ER diagram can be reduced to which of the following relational schemas?



	(b) Customer (customer-name, customer-street, customer-city, account-number)

(a) Customer (customer-name, customer- street, customer-city, account-number) Account(account-number, balance)	Account(account-number, balance, customer-name) Depositor (customer-name, account-number)
(c) Customer (customer-name, customer- street, customer-city) Account(account-number, balance) Depositor (customer-name, account- number)	(d) Customer (customer-name, customer-street, customer-city) Account(account-number, balance, customer-name)
18. The conjunctive selection operation $\sigma\theta1 \wedge \theta2$ (E) is equivalent to _____	
(a) $\sigma\theta1$(E) U $\sigma\theta2$ (E)	(b) $\sigma\theta1$(E) $\cap$ $\sigma\theta2$ (E)
(c) $\sigma\theta1(\sigma\theta2(E))$	(d) $\pi\theta1$(E) U $\pi\theta2$ (E)
19. Assume a table Employee (Eno, Ename, Dept, Salary, Phone) with 10000 records. Also assume that Employee has a non-clustering index on Salary, clustering indexes on Dept and Phone. If there is a SQL query "SELECT Eno FROM Employee WHERE Salary/12 = 10000", which of the following will happen during query execution?	
(a) Query will use index of Salary	(b) Query will use index of Dept
(c) Query will use index of Phone	(d) Query will not use index
20. Which of the following concurrency control mechanisms insist unlocking of all read and write locks of transactions at the end of commit?	
(a) Strict 2 Phase Locking	(b) Simple 2 Phase Locking
(c) Timestamp ordering	(d) Rigorous 2 Phase Locking

DBMS MCQs

1. What are the desirable properties of a transaction? A) Atomicity, consistency, isolation, deadlock
B) Atomicity, consistency, isolation, durability
C) Atomicity, concurrency, isolation, durability

2. If a transaction T has obtained an exclusive lock on item Q, then T can
A)readQB)writeQC)bothreadandwriteQ D)writeQbutnotreadQ
3. If two relations R and S are joined, then the non matching tuples of both R and S are ignored in
A) left outer join B) right outer join C) full outer join D) inner join
4. The FD A → B , DB→ C implies
A) DA→ C B) A → C C) B → A D) DB → A

5. The process of analyzing the given relation schemas based on their functional dependencies is known as
A) Dependency B) normalization C) both a and b D)none

6. Block-interleaved distributed parity is RAID level
(A) 2. (B) 3 (C) 4. (D) 5.
7. Maximum height of a B+ tree of order m with n key values is A) $Log_m(n)$ B) (m+n)/2 C) $Log_{m/2}(m+n)$ D) None of these

8. What operator performs pattern matching? A) LIKE B) NULL C) NOT NULL D) IS NULL

9. Manager's salary details are hidden from the employee. This is called as (A) Conceptual level data hiding
(B) Physical level data hiding
(C) External level data hiding

(D) Local level data hiding
10. Which of the following statements is false?

(A) Any relation with two attributes is in BCNF.
(B) A relation in which every key has only one attribute is in 2NF.
(C) A prime attribute can be transitively dependent on a key in 3NF relation. (D) A prime attribute can be transitively dependent on a key in BCNF relation.

11. A clustering index is created when _____. (A) primary key is declared and ordered
(B) no key ordered
(C) foreign key ordered

(D) there is no key and no order

12. Which of the following is not a consequence of non-normalized database?
A) Update Anomaly B) Insertion Anomaly C) Redundancy D) Lost update problem

13. An ER Model includes

I. An ER diagram portraying entity types. II. Attributes for each entity type
III. Relationships among entity types.

IV. Semantic integrity constraints that reflects the business rules about data not captured in the ER diagram.

(A) I, II, III & IV (B) I & IV (C) I, II & IV (D) I & III

14. If the closure of an attribute set is the entire relation then the attribute set is a A) Super key B) candidate key C) primary key D) not a key

15. Which of the following are the advantages of DBMS?
A) Redundancy is controlled B) unauthorized access is restricted C) enforce integrity constraints D) all of these

16. Division operation is ideally suited to handle queries of the type : (A) customers who have no account in any of the branches in Delhi. (B) customers who have an account at all branches in Delhi.

(C) customers who have an account in atleast one branch in Delhi. (D) customers who have only joint account in any one branch in Delhi

17. Which of the following is true ?
I. Implementation of self-join is possible in SQL with table alias. II. Outer-join operation is basic operation in relational algebra. III. Natural join and outer join operations are equivalent.
(A) I and II are correct. (B) II and III are correct.
(C) Only III is correct. (D) Only I is correct.

18. What kind of mechanism is to be taken into account for converting a weak entity set into strong entity set in entity-relationship diagram ?

(A) Generalization (B) Aggregation
(C) Specialization (D) Adding suitable attributes

19. The best normal form of relation scheme R (A, B, C, D) along with the set of functional dependencies F = {AB →C, AB → D, C → A, D → B} is

(A) Boyce-Codd Normal form (B) Third Normal form

(C) Second Normal form (D) First Normal form
20. Identify the minimal key for relational scheme R(A, B, C, D, E) with functional dependencies F = {A → B, B → C, AC → D}

(A) A (B) AE (C) BE (D) CE

1B 2C 3D 4A 5B 6D 7D 8A 9C

10 D 11 A 12 D 13 A 14 A 15 D

1.

2.

3.

4.

5.

6.

16 B 17 D 18 D 19 B 20 A

_____ users work on canned transactions
a. sophisticated b. naïve c. DBA d. casual

If a hospital has to store the description of each visit of a patient according to date what attribute you will use in the patient entity type?

a. Composite b. complex c. multi valued d. weak entity

Passing the request from one schema to another in DBMS architecture is called as _____
a. Mapping b. Communication c. Relational d. network

_____gives the concepts to describe the structure of the database. a. Data Model b. Relational model c. Domain model d. Schema model

_____is the description of the database
a. schema b. schema construct c. schema evolution d. snapshot

The advantage of DBMS over file systems is
a. redundancy b. data dependence c. multiple user d. single user

7. Changing the conceptual schema without having to change the external schema is called as _____

8.

9.

10.

11.

12. 13. 14. 15.

16.

17.

18.

a) physical data independence b) logical data independence c) data model d) relational model

_____is the first schema to be designed when you are developing a DBMS a) conceptual b) relational c) physical d) hierarchical

Creating a B Tree index for your database has to specify in _____. a. DDL b. SDL c. VDL d. TCL

DBMS cannot be classified on
a) data model b) Number of sites c) Number of users d) Concurrency level

_____attribute is used when the values are not divisible a) Simple b) derived c) multiple d) descriptive

Which of this is not a implementation data model
a. a. UML b. Relational c. Hierarchical d. network

The relationship that exists within the same entity type is called as _____ relationship. a. Identifying b. recursive c. logical d. physical
Adding a new column to a table comes in
a. a. DDL b. SDL c. VDL d. TCL
To change the access path programs are categorized under _____ data independence. a. Physical b. logical c. internal d. external

The data type describing the types of values that can appear in each column is called _____.

a. Domain b. Tuple c. Attribute d. Relation
The set of all attributes of a relation is called default _____.

a. Primary Key b. Super Key c. Foreign Key d. Alternate key Minimal super key of a relation is called _____.

a. Primary Key b. Super Key c. Foreign Key d. Alternate key
19. R has n tuples and S has m tuples, then the Cartesian product of R and S will produce

_____ tuples.
a.n+m b. n*mc. n/m d. n-m

20. _____ constraint is specified between two relations and is used to consistency among tuples of the two relations

maintain the

21.

22.

23.

24.

a. primary b. check c. referential d. secondary

In Relational model, the table is called a _____.

a. Domain b. Tuple c. Attribute d. Relation
The combination of selection and Cartesian product operators is _____

a. Division b. Set difference c. Join d. Union
The attributes in foreign key and primary key have the same _____.

operator

a. Number of tuples b. Number of attributes c. Domain d. Symbol _____ join requires that the two join attributes have the same name in both

relations.
a. Theta Join b. Equi join c. Self join d. Natural join

25. The expected size of the join result divided by the maximum size is called _____. a. Join cardinality b. join selectivity c. join count d. number of rows

1. Naïve
2. Complex
3. Mapping
4. Data model
5. Schema
6. multiple user
7. Logical Data Independence
8. Conceptual
9. SDL
10. Concurrency level
11. Simple
12. UML
13. recursive
14. DDL
15. Physical
16. Domain
17. Super Key
18. Primary Key
19. n * m
20. referential

21. Relation
22. Join
23. Domain
24. Natural join 25. join selectivity

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ITE303- Data Communication and Computer Networks

1. Error correction and error detection happens in _____ layer.
    1. Physical layer
    2. Data link layer
    3. Session layer
    4. Application layer Ans: a
2. _____ uses reliable message stream.
    1. Connection oriented service
    2. Connection less service
    3. UDP
    4. RS232 Ans: a

3. X.25 Networks is _____
    1. Packet switched
    2. Circuit switched
    3. Connection less service
    4. UDP

    Ans: a

4. ATM uses a ____ packet size
    1. Fixed 53byte
    2. Randomized
    3. Taken care by TCP fragmentation
    4. 48byte

    Ans: a

5. Switch works in ____ layer of OSI model.
    1. 2,3
    2. 3
    3. 2
    4. 1,2,3,4

    Ans: a

6. Elements in network core:

1. Routers
2. Applications
3. Hosts
4. Servers

Ans: a

7. Each router must implement some queuing discipline. Queuing allocates _____

    a. Bandwidth
    b. Protocol
    c. Connectivity parameters d. QoS levels

    Ans:a

8. In _____ mechanism arriving packets get dropped when queue is full regardless of flow or importance
    1. Drop tail
    2. FIFO
    3. Leaky bucket
    4. STF

    Ans:a

9. Mapping from ASCII strings to binary network address is done by _____
    1. DNS
    2. DHCP
    3. IMAP
    4. SNMP

    Ans:a

10. Network Interface card contains _____
    1. MAC address
    2. IP address
    3. Port no.
    4. Seq no. Ans: a

11. In
a. Host id.

datagram network packets typically routed using destination ___

2. IP address
3. Port no
4. Mac address

Ans:a

12. In

1. link cost changes
2. time
3. fragmentation size
4. sequence order

dynamic routing mechanism the route changes in response to _____

Ans:a

13. In

1. Dijkstra algo
2. Fredmen algo
3. Schezen algo
4. Domen algo

_____ least cost paths from one node is computed

Ans:a

14. A as a

1. campus-wide network.
2. Internet
3. Extranet
4. internet

Ans:a

15. _____ operate at the network layer, connecting two or more network segments that use the same or different data link layer protocols, but the same network layer protocol.
    1. Routers
    2. Firewall
    3. Bridges
    4. Gateway

    Ans:a

16. The _____connects different backbone networks together
    1. core layer
    2. access layer
    3. distributed layer
    4. link layer

    Ans:a

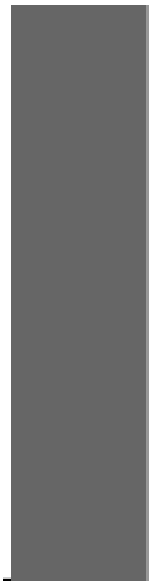
17. TCP manages a point-to-point and _____ connection for an application between two computers

    a. full-duplex b. simple
    c. half duplex d. multi point

    Ans:a

18. A virtual circuit connection consists of two endpoints. Each endpoint is a pair of integers
    1. host, port
    2. socket, port
    3. address, port

backbone network that connects LANs in several buildings is sometimes referred to



d. seqno, port Ans: a

19. UDP has a smaller overhead then TCP, especially when the total size of the messages is
    1. Small
    2. Large
    3. Segmented
    4. Sequenced

    Ans: a

20. Reliability in network is directly proportional to ____
    1. Availability
    2. Failure
    3. Speed
    4. Routing Ans:a

1. How switching is performed in the internet?

(A) Datagram approach to circuit switching at data link layer
(B) Virtual circuit approach to message switching at network layer (C) Datagram approach to message switching at datalink layer
(D) Datagram approach to packet switching at network layer.

Ans: A

2. A telephone switch is a good example of which of the following types of switches.

(A) packet (B) buffer (C) fabric (D) circuit

Ans: D

3. A bit-stuffing based framing protocol uses an 8-bit delimiter pattern of 01111110. If the

output bit-string after stuffing is 01111100101, then the input bit-string is

(A) 0111110100 (B) 0111110101 (C) 0111111101 (D) 0111111111

Answer: (B)

4. In the following pairs of OSI protocol layer/sub-layer and its functionality, the INCORRECT pair is

(A) Network layer and Routing
(B) Data Link Layer and Bit synchronization
(C) Transport layer and End-to end process communication (D) Medium Access Control sub-layer and Channel sharing

Ans: B

5. Which one of the following protocols is NOT used to resolve one form of address to another one?

(A) DNS (B) ARP (C) DHCP (D) RARP

Ans:C

6. The transport layer protocols used for real time multimedia, file transfer, DNS and email, respectively are

(A) TCP, UDP, UDP and TCP (B) UDP, TCP, TCP and UDP (C) UDP, TCP, UDP and TCP (D) TCP, UDP, TCP and UDP

Answer:-(C)

7. Which of the following transport layer protocols is used to support electronic mail?

(A) SMTP (B) IP
(C) TCP (D) UDP

Answer:-(C)

8. In one of the pairs of protocols given below, both the protocols can use multiple TCP connections between the same client and the server. Which one is that?

(A) HTTP,FTP
(B) HTTP,TELNET (C) FTP,SMTP
(D) HTTP,SMTP

Ans: A

9. The protocol data unit (PDU) for the application layer in the Internet stack is

(A) Segment (B) Datagram (C) Message (D) Frame

Answer:-(C)
10. In an Ethernet local area network, which one of the following statements is TRUE?

(A) A station stops to sense the channel once it starts transmitting a frame.
(B) The purpose of the jamming signal is to pad the frames that are smaller than the minimum frame size.
(C) A station continues to transmit the packet even after the collision is detected.
(D) The exponential backoff mechanism reduces the probability of collision on retransmissions.

Ans:D

11. In the IPv4 addressing format, the number of networks allowed under Class C addresses is

(A) 2^{14} (B) 2^{7} (C) 2^{21} (D) 2^{24}

Answer:-(C)

12. Which one of the following fields of an IP header is NOT modified by a typical IP router?

(A) Checksum
(B) Source address
(C) Time to Live (TTL) (D) Length

Ans:B

13. If a class B network on the Internet has a subnet mask of 255.255.248.0, what is the maximum number of hosts per subnet?

(A) 1022 (B) 1023 (C) 2046 (D) 2047

Ans:C

14. Assume that source S and destination D are connected through two intermediate routers labeled R. Determine how many times each packet hasto visit the network layer and the data link layer during a transmission from S to D.

(A) Network layer – 4 times and Data link layer-4 times (B) Network layer – 4 times and Data link layer-3 times (C) Network layer – 4 times and Data link layer-6 times (D) Network layer – 2 times and Data link layer-6 times

Answer:-(C)

15. Identify the correct sequence in which the following packets are transmitted on the network by a host when a browser requests a webpage from a remote server, assuming that the host has just been restarted.

(A) HTTP GET request, DNS query, TCP SYN (B) DNS query, HTTP GET request, TCP SYN (C) DNS query, TCP SYN, HTTP GET request (D) TCP SYN, DNS query, HTTP GET request

Ans:C

16. An IP router with a Maximum Transmission Unit (MTU) of 1500 bytes has received an IP packet of size 4404 bytes with an IP header of length 20 bytes. The values of the relevant fields in the header of the third IP fragment generated by the router for this packet are

(A) MF bit: 0, Datagram Length: 1444; Offset: 370 (B) MF bit: 1, Datagram Length: 1424; Offset: 185
(C) MF bit: 1, Datagram Length: 1500; Offset: 370 (D) MF bit: 0, Datagram Length: 1424; Offset: 2960

Answer: (A)

17. One of the header fields in an IP datagram is the Time to Live (TTL) field. Which of the following statements best explains the need for this field?

(A) It can be used to priortize packets
(B) It can be used to reduce delays
(C) It can be used to optimize throughput (D) It can be used to prevent packet looping Ans: D

18. Using public key cryptography, X adds a digital signature σ to message M, encrypts <M, σ >, and sends it to Y, where it is d

ecrypted. Which one of the following sequences of keys is used for the operations?

(A) Encryption: X's private key followed by Y's private key; Decryption: X's public key followed by Y's public key
(B) Encryption: X's private key followed by Y's public key; Decryption: X's public key followed by Y's private key

(C) Encryption: X's public key followed by Y's private key; Decryption: Y's public key followed by X's private key
(D) Encryption: X's private key followed by Y's public key; Decryption: Y's private key followed by X's public key

Answer:-(D)

19. Suppose that everyone in a group of N people wants to communicate secretly with N-1 others using symmetric key cryptographic system. The communication between any two persons should not be decodable by the others in the group. The number of keys required in the system as a whole to satisfy the confidentiality requirement is

(A) 2N
(B) N(N-1) (C) N(N-1)/2 (D) $(N-1)^2$

Ans: C

20. A layer -4 firewall (a device that can look at all protocol headers up to the transport layer) CANNOT

(A) block entire HTTP traffic during 9:00PM and 5:00AM
(B) block all ICMP traffic

(C) stop incoming traffic from a specific IP address but allow outgoing traffic to the same IP address
(D) block TCP traffic from a specific user on a multi-user system during 9:00PM and 5:00AM

Ans: D

1. In Circuit Switching, resources need to be reserved during the a) Data transfer phase
b) Teardown phase.
c) Setup phase

d) Propagation phase

2. The resources needed for communication between end systems are reserved for the duration of session between end systems in _____
a) Packet switching
b) Circuit switching

c) Line switching
d) Frequency switching

3.If message in Segmentation and Reassembly (SAR) sub layer of Application Adaptation Layer 3/4 has value of Segment type is 11 then it is called a
a) Beginning message
b) Ending message

c) Single-segment message

d) Middle message

4. Congestion control and quality of service is qualities of the

a) ATM

b) DH
c) Frame Relay d) SONET

5. The local host and the remote host are defined using IP addresses. To define the processes, we need second identifiers called.....

a) UDP addresses
b) transport addresses c) Port addresses
d) TCP addresses

6. UDP uses..... to handle outgoing user datagrams from multiple processes on one host.

a) Flow Control

b) Multiplexing

c) Demultiplexing d) Data Control

7. The ..... protocol defines a set of messages sent over either User Datagram Protocol (UDP) port53 or Transmission Control Protocol(TCP) port53.

a) Name space

b) DNS

c) Domain space d) Zone transfer

8. Which type of error detection uses binary division?

a) Parity
b) Longitudinal redundancy checking c) Checksum checking
d) Cyclic redundancy checking

9. When a network interface has a failure in its circuitry, it sends a continuous stream of frames causing the Ethernet LAN to enter a Collapse state. This condition is known as _____.

a) Scattering b) Blocking c) Jabbering d) Refreshing

10. Value of checksum must be recalculated regardless of

    a) De-fragmentation

    b) Fragmentation

    c) Transferred d) Shared

11. Dotted-decimal notation of 10000001 00001011 00001011 11101111 would be

a) 193.131.27.255

b) 129.11.11.239

c) 192.168.10.9 d) 172.16.11.3

12. Which one of the following allows a user at one site to establish a connection to another site and then pass keystrokes from local host to remote host?
a) HTTP
b) FTP

c) Telnet

d) Sonet

13. These networking classes encapsulate the "socket" paradigm pioneered in the (BSD) Give the abbreviation of BSD?
a) Berkeley Software Distribution
b) Berkeley Socket Distribution

c) Berkeley System Data
d) Berkeley Synchronization Data

14. Digital signature envelope is decrypted by using _____.
    1. a) Merchant Private Key.
    2. b) Payment'sPrivateKey.
    3. c) Payment Public Key.
    4. d) Merchant's Public Key.
15. The processed S/MIME along with security related data is called as _____.
    1. a) Public Key Cryptography Standard.
    2. b) Private Key Cryptography Standard.
    3. c) S/MIME.
    4. d) MIME.

16. _____ Substitution is a process that accepts 48 bits from the XOR operation.

1. a) S-box.
2. b) P-box.
3. c) Expansion permutations.
4. d) Keytransformation.

17. In ..... Mode, the authentication header is inserted immediately after the IP header.

1. a) Tunnel
2. b) Transport
3. c) Packet switching
4. d) Payload of the header

18. _____ uniquely identifies the MIME entities uniquely with reference to multiple contexts.

1. a) Content description.
2. b) Content-id.
3. c) Content type.
4. d) Content transfer encoding.

19. Which one of the following is a cryptographic protocol used to secure HTTP connection? a) Stream Control Transmission Protocol (SCTP)
b) Transport Layer Security (TSL)
c) Explicit Congestion Notification (ECN)

d) Resource Reservation Protocol

20. ---------- is a mode of operation for a block cipher, with the characteristic that each possible block of plaintext has a defined corresponding ciphertext value and vice versa. a) Foot printing
b) Hash Function

c) Water Mark
d) Electronic Code Book

a) MOvSB/SW b) CMPS
c) SCAS register

1) loads AL/AX register by content of a string
2) moves a string of bytes stored in source to destination
3) compares two strings of bytes or words whose length is stored in CX

Multiple Choice Questions on Microprocessor & its peripherals

8086:

1. The 16 bit flag of 8086 microprocessor is responsible to indicate _____ A. the condition of result of ALU operation
   B. the condition of memory
   C. the result of addition

   D. the result of subtraction

   Answer : A

2. The BIU contains FIFO register of size _____ bytes

   A. 8 B. 6 C. 4 D. 12

   Answer : B

3. The _____ translates a byte from one code to another code

   A. XLAT B. XCHNG C. POP D. PUSH

   Answer : A

4. A 20-bit address bus allows access to a memory of capacity

   A.1MB B. 2 MB C. 4 MB D. 8 MB

   Answer : A

5. If the offset of the operand is stored in one of the index registers, then it is

   A. based indexed addressing mode
   B. relative based indexed addressing mode C. indexed addressing mode
   D. none of the mentioned
   Answer: c

6. 2. Which of the following is not a data copy/transfer instruction? a) MOV

b) PUSH
c) DAS
d) POP Answer : C

7. Match the following

d) LODS
a) a-3,b-4,c-2,d-1 b) a-2,b-1,c-4,d-3 c) a-2,b-3,c-1,d-4 d) a-2,b-3,c-4,d-1 Answer : d

8. 20. NOP instruction introduces a) Address

b) Delay
c) Memory location

4) scans a string of bytes or words

Answer : b

8255 (Programmable Input – Output Port)

9. All the functions of the ports of 8255 are achieved by programming the bits of an internal register called

   a) data bus control
   b) read logic control
   c) control word register d) none
   Answer: c

10. The data bus buffer is controlled by a) control word register
    b) read/write control logic
    c) data bus

    d) none

    Answer: b

11. The port that is used for the generation of handshake lines in mode 1 or mode 2 is

    a) port A
    b) port B
    c) port C Lower d) port C Upper Answer: d

8257 (DMA Controller)

12. In 8257 (DMA), each of the four channels has a) a pair of two 8-bit registers
    b) a pair of two 16-bit registers
    c) one 16-bit register

    d) one 8-bit register

Answer: b

13. The common register(s) for all the four channels of 8257 are

    a) DMA address register
    b) terminal count register
    c) mode set register and status register d) none of the mentioned
    Answer: c

14. In 8257 register format, the selected channel is disabled after the terminal count condition is reached when

    a) auto load is set
    b) auto load is reset c) TC STOP bit is reset d) TC STOP bit is set Answer: d

15. The pin that requests the access of the system bus is

a) HLDA b) HRQ
c) ADSTB Answer: b

8254 (Programmable Interval Timer)

16. The number of counters that are present in the programmable timer device 8254 is a) 1

    b) 2
    c) 3
    d) 4 Answer: c

17. The mode that is used to interrupt the processor by setting a suitable terminal count is a) mode 0

    b) mode 1 c) mode 2 d) mode 3 Answer: a

18. In control word register, if SC1=0 and SC0=1, then the counter selected is a) counter 0

    b) counter 1 c) counter 2 Answer: b

19. The counter starts counting only if a) GATE signal is low
    b) GATE signal is high
    c) CLK signal is low

    d) CLK signal is high

    Answer: b

20. The result of MOV AL, 65 is to store

    A. store 0100 0010 in AL B. store 42H in AL

C. store 40H in AL
D. store 0100 0001 in AL Answer: D

1. One operation that is not given by magnitude comparator

1. equal
2. less
3. greater
4. addition

2. Adding 1001 and 0010 gives output of

A. 1011

2. 1111
3. 0
4. 1010

3. Magnitude comparator compares using operation of

1. addition
2. subtraction
3. division
4. multiplication

4. A Boolean function may be transformed into

1. logicaldiagram
2. logicalgraph
3. map
4. matrix

5. Is it possible to find two algebric expressions that specify same function

1. no
2. yes
3. maybe
4. never

6. Using 10's complement 72532- 3250 is

1. 69282
2. 69272
3. 69252
4. 69232

7. X=1010100 and Y=1000011 using 2's complement X-Y is A. 10111

2. 101101
3. 10011

4. 10001

8. X=1010100 and Y=1000011 using 1's complement Y-X is

1. -10111
2. -10011
3. -10001
4. -11001

9. Table that is not a part of asynchronous analysis procedure

1. transitiontable
2. statetable
3. flowtable
4. excitation table

10. Shift registers are used for

1. shifting
2. rotating
3. adding

D. both a and b

11. Two variables will be represented by

1. eightminterms
2. sixminterms
3. fiveminterms

D. fourminterms

12. Adjacent squares represents a

A. circle
B. variable C. literal D. minterm

13. Eight minterms will be used for

1. threevariables
2. fourvariables
3. five variables
4. sixvariables

14. Minterms are arranged in map in a sequence of

A. binarysequence

B. graycode

C. binaryvariables D. BCDcode

15. A circuit that converts n inputs to 2^n outputs is called A. encoder

B. decoder

C. comparator
D. carrylookahead

16. Encoders are made by three

A. ANDgate

B. ORgate

C. NANDgate D. XORgate

17. Decoder is a

A. combinationalcircuit

B. sequentialcircuit C. complexcircuit D. gate

18. BCD to seven segment is a

A. encoder

B. decoder
C. comparator
D. carrylookahead

19. One that is not type of flipflop is

A. JK B. T C. RS D. ST

20. Flip-flops can be constructed with two

A. NANDgates

B. ORgates C. ANDgates D. NOTgates

21. RS flip-flops are also called

A. RSlatch

B. SRlatch

C. TSlatch D. ST latch

22. Decimal digit in BCD can be represented by

1. 1 input line
2. 2 input lines
3. 3 input lines
4. 4 input lines

23. In BCD no. 1010 has

A. meaning

B. nomeaning

C. value

D. Vcc

24. To perform product of maxterms Boolean function must be brought into

1. and terms
2. orterms
3. notterms
4. nandterms

25. In excitation table of D flipflop next state is equal to

A. presentstate B. nextstate
C. inputstate D. Dstate

26. X+y=z represents operation that is

A. AND

B. OR

C. NOT D. XOR

27. Design procedure of combinational circuit involves

1. 4 steps
2. 5 steps
3. 6 steps
4. 8 steps

28. In design procedure input output values are assigned with A. numeric values

B. lettersymbols

C. 0's D. 1's

29. Output of AND gates in SOP is connected to

A. NOTgates

B. ORgates

C. ANDgates D. XORgates

30. Mod-6 and mod-12 counters are most commonly used in:
1. frequency counters 2. multiplexed displays 3. digital clocks
D. power consumption meters

31. How many illegitimate states has synchronous mod-6 counter ?

3

2 1 6

32. The clock signals are used in sequential logic circuits to

3

5

7 9

A.

B. C. D.

A.Tell the time of the day

B.Tell how much time has elapsed since the system was turned on

C.Carry parallel data signals

D.Synchronize events in various parts of system

33. To build a mod-19 counter the number of flip-flops required is

A.

B.

C.

D.

33. The main difference between JK and RS flip-flop is that

A.JK flip flop needs a clock pulse
B.There is a feedback in JK lip-lop
C.JK flip-flop accepts both inputs as 1
D.JK flip-flop is acronym of Junction cathode multivibrator

34. Which of the following unit will choose to transform decimal number to binary code ?

A.Encoder
B.Decoder

C. D.

Multiplexer Counter

35. Simplified form of the boolean expression (X + Y + XY) (X + Z) is

A.X + Y + Z

B.XY + YZ

C.X + YZ

D.XZ + Y

36. Which of the following boolean expressions is not logically equivalent to all of the rest ?

A.ab + (cd)' + cd + bd'

B.a (b + c) + cd

C.ab + ac + (cd)'

D.bd' + c'd' + ab + cd

37. Which of the following statements is true ?

A.(A + B) (A + C) = AC + BC

B.(A + B) (A + C) = AB + C

C.(A + B) (A + C) = A + BC

D.(A + B) (A + C)= AC + B

38. A graphical display of the fundamental products in a truth-table is known as

A.Mapping

B.Graphing

C.T-map

D.karnaugh-map

39. The minimum number of NAND gates required to implement the Boolean function. A + AB' + AB'C is equal to

A.zero

B.1

C.4

D.

7

40. Which of the following logic expression is incorrect?

A.1 ⊕ 0 = 1
B.1 ⊕ 1 ⊕ 0 =1
C.1 ⊕ 1 ⊕ 1 = 1
D.1 ⊕ 1 = 0

OPERATING SYSTEMS

1. In the process state transition diagram, the transition from the READY state to the RUNNING state indicates that:

a. A process was pre-empted by another process
b. A process has blocked for a semaphore or other operation c. A process is done waiting for an I/O operation
d. A process was just created
Ans: a

2. Which of the following is shared between all of the threads in a process? Assume a kernel level thread implementation.

a. Register values
b. File descriptors
c. Scheduler priority d. Local variables Ans: b

3. Which of the following is not true?

a. Shortest Remaining Time next is the best preemptive scheduling algorithm in terms of turnaround time

b. Priority scheduling can suffer from starvation
c. Lottery scheduling is pre-emptive
d. Multi-level feedback queue guarantee equal time to all processes Ans: d

4. A critical region is

a. The part of a program in which shared data is accessed b. The most important part of the program

---

c. The part of the kernel that interfaces directly to the device controllers d. The part of a program in which a bug would cause the program to exit Ans: a

5. Which of the following is not used for synchronization?

a. The bakery algorithm
b. The banker's algorithm
c. Busy waiting with test and set d. Monitors
Ans: b

6. Which of the following is not true of virtual memory?

a. It allows more efficient use of memory
b. It requires hardware support
c. It reduces the need for relocatable code
d. It requires the use of a disk or other secondary storage Ans: d

7. Which of the following is not usually stored in a two-level page table?

a. Virtual page number b. Physical page number c. Dirty bit
d. Reference bit
Ans: a

8. Which of the following paging algorithms is most likely to be used in a virtual memory system?

a. FIFO
b. Second chance
c. Least Recently Used d. Least Frequently Used Ans: b

9. The purpose of a TLB is

a. To cache page translation information
b. To cache frequently used data
c. . To hold register values while a process is waiting to be run d. To hold the start and length of the page table
Ans: a

10. Which of the following is not true about segmented memory management?

a. Segment length must be a multiple of the page size
b. Segmentation allows multiple linear address space in one process
c. Segmentation can be used with paging to keep segments partially resident in memory d. A segment can be read-only for one process and read-write for another
Ans: a

11. System calls:

a. Provide a rich and flexible API for software developers
b. Often change dramatically between different releases of an operating system c. Protect kernel data structures from user code
d. Allow the operating system to optimize performance

Ans: c

12. What is the main difference between traps and interrupts?

a. How they are initiated
b. The kind of code that's used to handle them c. Whether or not the scheduler is called
d. How the operating system returns from them Ans: a

13. Buffering is useful because

a. It makes it seem like there's more memory in the computer b. It reduces the number of memory copies required
c. It allows all device drivers to use the same code
d. It allows devices and thee CPU to operate asynchronously Ans: d

14. The main advantage of DMA is that it

a. Increases system performance by increasing concurrency b. Allows the CPU to run faster
c. Reduces the traffic on the data bus
d. Removes the requirement that transfers be properly aligned Ans: a

15. Which of the following disk seek algorithms would be the best choice to implement in a system that services an average of 5 disk requests per second?

a. FCFS b. SSTF

c. SCAN
d. C-SCAN Ans: a

16. Which of the following disk seek algorithms has the most variability in response time?

a. FCFS
b. SSTF
c. SCAN
d. C-SCAN Ans: b

17. A typical hard drive has a peak throughput of about

a. 2 x 10^5 bytes per second b. 2 x 10^6 bytes per second c. 2 x 10^7 bytes per second d. 2 x 10^8 bytes per second Ans: c

18. RAID is a way to:

a. Increase hard drive latency and performance
b. Increase hard drive performance and decrease cost c. Increase hard drive reliability and performance
d. Increase hard drive reliability and decrease cost Ans: c

19. Which of these would not be a good way for the OS to improve battery lifetime in a laptop?

a. Shut down the hard drive until it's needed
b. Reduce the processor speed while it's idle
c. Turn off power to the memory
d. Shut down the modem when it's not connected Ans: c

20. Which of the following is not included in an inode in Linux?

a. File owner
b. File name
c. File modification date
d. Pointer to the first data block Ans: b

ITE208-Operating Systems Multiple Choice Questions

1.Round robin scheduling is essentially the preemptive version of _____

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

Answer: FIFO

2.A page fault occurs

1. 1) when the page is not in the memory
2. 2) when the page is in the memory
3. 3) when the process enters the blocked state
4. 4) when the process is in the ready state

Answer: when the page is not in the memory

3.Let S and Q be two semaphores initialized to 1, where P0 and P1 processes the following statements wait(S);wait(Q); ---; signal(S);signal(Q) and wait(Q); wait(S);--- ;signal(Q);signal(S); respectively. The above situation depicts a _____ .

1. 1) Semaphore
2. 2) Deadlock
3. 3) Signal
4. 4) Interrupt

Answer: Deadlock

4.What is a shell ?

1. 1) It is a hardware component
2. 2) It is a command interpreter
3. 3) It is a part in compiler
4. 4) It is a tool in CPU scheduling

Answer: It is a command interpreter

5. Routine is not loaded until it is called. All routines are kept on disk in a relocatable load format. The main program is loaded into memory & is executed. This type of loading is called _____

1. 1) Static loading
2. 2) Dynamic loading
3. 3) Dynamic linking
4. 4) Overlays

Answer: Dynamic linking

6. In the blocked state

1. 1) the processes waiting for I/O are found
2. 2) the process which is running is found
3. 3) the processes waiting for the processor are found
4. 4) the process ready to execute

Answer: the processes waiting for I/O are found

7. What is the memory from 1K - 640K called ?

1. 1) Extended Memory
2. 2) Normal Memory
3. 3) Low Memory
4. 4) Conventional Memory

Answer: Conventional Memory

8.Virtual memory is _____.

1. 1) An extremely large main memory
2. 2) An extremely large secondary memory
3. 3) An illusion of extremely large main memory
4. 4) A type of memory used in super computers.

Answer: An illusion of extremely large main memory

9.The process related to process control, file management, device management, information about system and communication that is requested by any higher level language can be performed by _____.

1. 1) Editors
2. 2) Compilers
3. 3) System Call
4. 4) Caching

Answer: System Call

10.If the Disk head is located initially at 32, find the number of disk moves required with FCFS if the disk queue of I/O blocks requests are 98,37,14,124,65,67.

1. 1) 310
2. 2) 324
3. 3) 315
4. 4) 321

Answer: 321

11.The solution to Critical Section Problem is : Mutual Exclusion, Progress and Bounded Waiting.

1. 1) The statement is false
2. 2) The statement is true.
3. 3) The statement is contradictory.
4. 4) None of the above

Answer: The statement is true.

12.The problem of thrashing is effected scientifically by _____.

1. 1) Program structure
2. 2) Program size
3. 3) Primary storage size
4. 4) Secondary storgae

Answer: Program structure

13.Which of the following file name extension suggests that the file is Backup copy of another file ?

1. 1) TXT
2. 2) COM
3. 3) BAS
4. 4) BAK

Answer: BAK

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

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

Answer: Demand Paging

15.Switching the CPU to another Process requires to save state of the old process and loading new process state is called as _____.

1. 1) Process Blocking
2. 2) Context Switch
3. 3) Time Sharing
4. 4) Context sharing

Answer: Context Switch

16.Which directory implementation is used in most Operating System?

1. 1) Single level directory structure
2. 2) Two level directory structure
3. 3) Tree directory structure
4. 4) Acyclic directory structure

Answer: Tree directory structure

17. A thread

1. 1) is a lightweight process where the context switching is low
2. 2) is a lightweight process where the context swithching is high
3. 3) is used to speed up paging
4. 4) none of the above

Answer: is a lightweight process where the context switching is low

18._____ is a high level abstraction over Semaphore.

1. 1) Shared memory
2. 2) Message passing

3. 3) Monitor
4. 4) Mutual exclusion

Answer: Monitor

19. Which module gives control of the CPU to the process selected by the short-term scheduler?

1. 1) dispatcher
2. 2) interrupt
3. 3) long –term scheduler
4. 4) short-term scheduler

Answer: dispatcher

20. In priority scheduling algorithm, when a process arrives at the ready queue, its priority is compared with the priority of

1. 1) all process
2. 2) currently running process
3. 3) parent process
4. 4) init process

Answer: currently running process

1. Assume that 'C' is a Counting Semaphore initialized to value '10'. Consider the following program segment:
P(C); V(C); P(C); P(C); P(C); V(C); V(C)
V(C); V(C); V(C); P(C); V(C); V(C); P(C)

What is the value of C? (a) 6
(b) 12

(c) 8
(d) 10
Solution: Option (b)

2. Consider the following pseudo code fragment: printf ("Hello");
   if(!fork( ))
   printf("World");

   Which of the following is the output of the code fragment? (a) Hello Hello World World
   (b) Hello World World
   (c) Hello World

   (d) Hello World Hello World

   Solution: Option (c)

3. A scheduling algorithm assigns priority proportional to the waiting time of a process. Every process starts with priority zero (the lowest). The scheduler re-valuates the process priorities every T time units and decides the next process to schedule. Which one of the following is true if the processes have no I/O operations and all arrive at time zero?
    1. This algorithm is equivalent to FCFS
    2. This algorithm is equivalent to Round Robbin
    3. This algorithm is equivalent to SJF
    4. This algorithm is equivalent to Shortest Remaining Time First

    Solution: Option (b)

4. The highest response ratio next Scheduling policy favors 'X' jobs, but is also limits the waiting time of 'Y' jobs. What are X and Y?
    (a) Shorter Jobs, Low Priority Jobs
    (b) Longer Jobs, High Priority Jobs

    (c) Longer Jobs, Shorter Jobs (d) Shorter Jobs, Longer Jobs Solution: Option (d)

5. Which of the following instructions should be allowed only in Kernel Mode?

(a) Disable all interrupts
(b) Read the time-of-day clock (c) Set the time-of-day clock (d) Change the Memory Map Solution: Option (a)

6. Consider the below code fragment: if(fork k( ) = = 0)
    {
    a= a+5; printf("%d, %d \n", a, &a); }

    else
    {
    a= a – 5;
    printf("%d %d \n", 0, &a);
    }
    Let u, v be the values printed by parent process and x, y be the values printed by child process. Which one of the following is true?
    (a) u= x + 10 and v = y
    (b) u= x + 10 and v≠y
    (c) u + 10= x and v = y
    (d) u + 10= x and v ≠y
    Solution: Option (a)

7. There are 'm' processes and 'n' instances of a Resource provided. Each process needs 'P' instances of the resource. In which case deadlock will never occur?
    (a) (P - 1) m + 1 ≤ n
    (b) (P - 1) m ≤ n + 1

    (c) (P - 1) m + 1 < n (d) (P - 1) m ≤ n + 1 Solution: Option (a)

8. A system has a resource ‘Z’ with 20 instances; each process needs 5 instances to complete its execution. What is the minimum process in the system that may cause deadlock?
   (a) 4

   (b) 5
   (c) 10
   (d) 6
   Solution: Option (b)

9. A solution to the Dining Philosopher’s problem which avoids Deadlock can be:
   (a) Ensure that all the Philosopher’s pick up the left fork before the right fork
   (b) Philosophers can select any fork randomly
   (c) Ensure that all the Philosophers except one pick up the left fork while that particular

   philosopher pick up right fork before left fork (d) Deadlock cannot be avoided
   Solution: Option (c)

10. Which of the process transition is invalid? (a) Run→Ready
    (b) Suspend wait→Suspend ready
    (c) Wait/ Block→Run

    (d) Run→Terminate Solution: Option (c)

11. The process in which of the following states will be in secondary memory? (a) New, Ready, Wait/Block
    (b) New, Wait/Block, suspend wait, Suspend ready
    (c) wait/Block, suspend wait, Suspend ready

    (d) New, suspend wait, Suspend ready

    Solution: Option (d)

12. Degree of multiprogramming is controlled by (a) Long term schedule
    (b) Short term schedule

(c) Medium term schedule
(d) Depends on number of CPU’s Solution: Option (a)

13. Consider a system with ‘M’ CPU processors and ‘N’ processes then how many processes can be present in ready, running and blocked state at maximum
    (a) N, M, N
    (b) N, M, M

    (c) M, N, M
    (d) N, N+M, M Solution: Option (a)

14. The main function of dispatcher is:
    (a) swapping a process to disk
    (b) assigning ready process to the CPU
    (c) suspending some of the processes when CPU load is high (d) bring processes from the disk to main memory
    Solution: Option (b)
15. Consider 'n' processes sharing the CPU in a round robin fashion. Assume that the context switch takes 's' seconds. What must be the quantum 'q' such that the overhead of context switching is minimized and at same time each process is getting guaranteed execution on the CPU atleast once in every 't' seconds?
    (a) $q \leq (t - ns)/(n-1)$
    (b) $q \leq (t - ns)/(n+1)$
    (c) $q \geq (t - ns)/(n-1)$
    (d) $q \geq (t - ns)/(n+1)$
    Solution: Option (a)
16. When two or more processes trying to execute a set of instructions and if the output depends on the order of execution of the process, this is termed as:
    (a) Critical section
    (b) Race condition

    (c) Synchronization

(d) Progress

Solution: Option (c)

17. Consider the processes P1, P2, P3, P4 whose arrival times are 0, 2, 3, 5 and burst times are 7, 4, 2, 4 respectively. What is the average TAT and average WT if they follow Shortest Remaining Time First scheduling algorithm?
    (a) 8.5, 3.5

    (b) 8, 3.75
    (c) 6, 3
    (d) 4,5
    Solution: Option (b)

18. If α=0.4 and T_1=10. Consider the actual burst times of t_1, t_2, t_3 are 5, 7, 2 respectively. What is the predicted burst time of t_4 using Exponential Average method?
    (a) 3.36
    (b) 4.3

    (c) 5.36
    (d) 6.66
    Solution: Option (c)

19. In Multi-Processing Operating Systems:
    (a) Maximum utilization of CPU can be achieved (b) Maximum throughput is achieved

(c) Maximum security can be achieved
(d) Not suitable for Real Time Applications Solution: Option (a)

20. A system has ‘n’ processes and each process need 2 instances of a resource. There are n+1 instances of resource provided. This could:
(a) lead to deadlock
(b) lead to starvation & the deadlock

(c) never leads to deadlock (d) leads to inconsistency Solution: Option (c)

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1) The following HTML element is used to display horizontal line A.

B. <h> C. <hr> D. <h2>

Answer: C

2) The following HTML _____ element contains meta data which is not displayed inside the document.

A. <form> B. <title> C. <table> D. <frame>

Answer: B

3) <h2 style="color:blue">I am Blue</h2> is ____ way of styling HTML elements

1. Inline style
2. Internal style
3. External style
4. Default

Answer: A

4) The following HTML element helps making animated text A.

B. <ins>
C. <mark>
D. <marquee>

Answer: D

5) <font face="Lucida Calligraphy,Comic Sans MS,Lucida Console"> will specify _____ font

A. Lucida Calligraphy

B. LucidaConsole
C. first available font installed on computer D. last available font installed on computer

Answer: C

6) _____ is used to define a special CSS style for a group of HTML elements A. class attribute

B. nameattribute C. groupattribute D. id attribute

Answer: A

7) The following HTML attribute is used to specify the URL of the html document to be opened when a hyperlink is clicked.

A. SRC B. HREF C. LINK D. PATH

Answer: B

8) Which of these will create a shuffled list? A.

B.
C. <dl>
D. Nested list

Answer: D

9) The _____ attribute defines the action to be performed when the form is submitted

1. method attribute
2. action attribute
3. onSubmit attribute
4. onClick attribute

Answer: B

10) Internet backbone refers to _____

1. Web browser
2. Web server
3. Data
4. Data route

Answer: C

11) _____ is referred to as Static Web

1. Web 1.0
2. Web 2.0
3. Web 3.0
4. Web 4.0

Answer: C

12) What does JSP stand for?

1. Java Scripting Pages
2. JavaServicePages
3. Java Server Pages
4. Java Script Program

Answer: C

13) How do you write "Hello World" in PHP?

1. using System.out.println
2. using Document.Write("Hello World")
3. "Hello World"
4. using echo("Hello World")

Answer: D

14) What are the parameters of the service method?
A. ServletRequest and ServletResponse

B. HttpServletRequestandHttpServletResponse C. HttRequest and HttpResponse
D. Request and Response

Answer: B

15) How does servlet differ from CGI?

1. Light weight Process
2. Open source
3. Simple
4. Easy to remember

Answer: A

16) Which is the right declaration Tag in JSP? A. <%! ..... %>)

2. <%@ .....%>)
3. <% ..... %>
4. <%= ..... %>)

Answer: A

17) The servlet life cycle has the following cycle. A. Init destroy service

B. Servicedestroy
C. Initservicedestroy D. Init service

Answer: C

18) How many times service() method will be executed in a servlet life cycle?

1. Twice
2. As many as client requests
3. As many as server responds
4. Once

Answer: B

19) In HTTP, which method gets the resource as specified in the URI

1. GET
2. POST
3. PUT
4. TRACE

ANSWER: A

20) Which of the following is not a session management technique in Servlet

1. Password <form> field
2. Hidden <form> field
3. Cookies
4. Session API

ANSWER A

Web Technology OBJECTIVE TYPE QUESTIONS

1. What should be the first tag in any HTML document? a. <head>

b. <title>
c. <html>
d. <document>

Ans :

2. How can you make a bulleted list? a. <list>

   b. <nl> c. d. Ans :

3. What is the correct HTML for making a hyperlink? a. ICT Trends Quiz b. ICT Trends Quiz c. <http://mcqsets.com

   d. url="http://mcqsets.com">ICT Trends Quiz Ans :

4. Choose the correct HTML tag to make a text italic a. <ii>

b. <italics> c. <italic> d. <i>
Ans :

5. What is the correct HTML for adding a background color? a. <body color=”yellow”>
   b. <body bgcolor=”yellow”>
   c. <background>yellow</background>

   d. <body background=”yellow”>

   Ans :

6. Which attribute is used to name an element uniquely? a. class

   b. id
   c. dot
   d. all of above Ans :

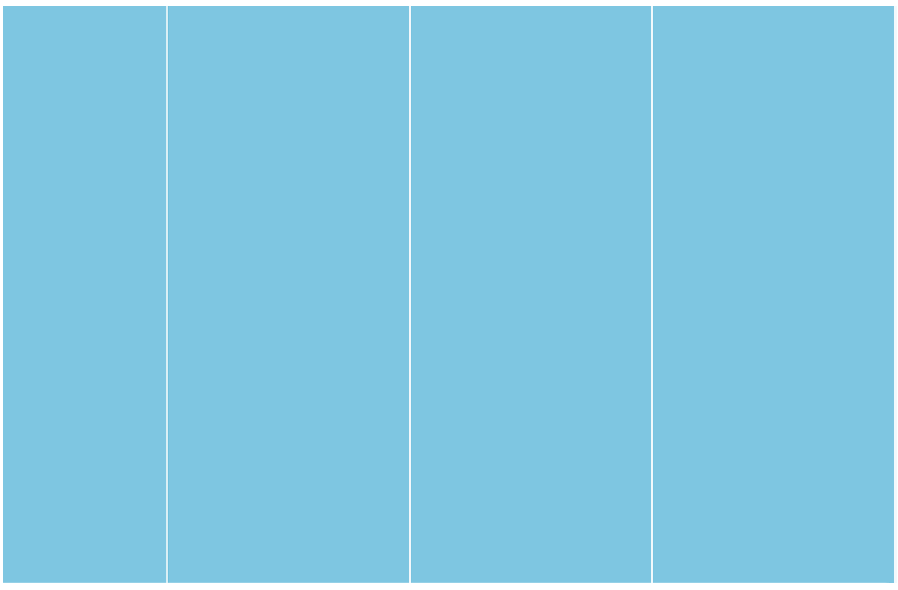
7. What is the full form of HTTP? a. Hyper text transfer protocol
   b. Hyper text transfer package
   c. Hyphenation text test program d. none of the above

   Ans :

8. What is the correct way of describing XML data? a. XML uses a DTD to describe data
   b. XML uses a description node to describe data
   c. XML uses XSL to describe the data

   d. XML uses a validator to describe the data

   Ans :



9.

Ans :

10.

Ans :

11.

Ans :

12.

Ans :

13.

Ans :

14.

Which of the following can't be done with client-side JavaScript?

A. Validating a form

B. Sending a form's contents by email

C. Storing the form's contents to a database file on the server

D. None of the above

What is the correct JavaScript syntax to write "Hello World"?

A. System.out.println("Hello World")

B. println ("Hello World")

C. document.write("Hello World")

D. response.write("Hello World")

What is the correct syntax for referring to an external script called " abc.js"?

A. <script href=" abc.js">

B. <script name=" abc.js">

C. <script src=" abc.js">

D. None of the above

How to create a Date object in JavaScript?

A. dateObjectName = new Date([parameters])

B. dateObjectName.new Date([parameters])

C. dateObjectName := new Date([parameters])

D. dateObjectName Date([parameters])

<script type="text/javascript">

x=4+"4";

document.write(x);

</script>

Output------?

A. 44

B. 8 C. 4

D. Error output

<script type="text/javascript">

var s = "9123456 or 80000?";

```
var pattern = /\d{4}/;

var output = s.match(pattern);

document.write(output);

</script>
```

A. 9123

B. 91234 C. 80000

D. None of the above

Ans :

15. What makes Ajax unique?

A. It works as a stand-alone Web-development tool. B. It works the same with all Web browsers.
C. It uses C++ as its programming language.
D. It makes data requests asynchronously.

Ans :

Ans :

Ans :

18. Which one of the following function is used to start a session? A.

B.
C.
D. Ans :

19. If the directive session.cookie_lifetime is set to 3600, the cookie will live until..

1. 3600 sec
2. 3600 min
3. 3600 hrs
4. the browser is restarted

Ans :

16. What does the XMLHttpRequest object accomplish in Ajax? | Ajax

A. It's the programming language used to develop Ajax applications.
B. It provides a means of exchanging structured data between the Web server and

client.
C. It provides the ability to asynchronously exchange data between Web browsers and a Web server.
D. It provides the ability to mark up and style the display of Web-page text.

17. AJAX made popular by | Ajax

A. Microsoft
B. IBM
C. Sun Micro system D. Google

20.

A.
B.
C.
D. Ans :

1.

What does the following bit of JavaScript print out?

start_session() session_start()

session_begin()

begin_session()

When you want to store user data in a session use the . . . . array.

$_SESSION

SYS_SESSION

$SESSION

$_SESSIONS

```
var a = [1,,3,4,5];
console.log([a[4], a[1], a[5]]);
```

a) 5,undefined,undefined

b) 5,3,undefined
c) 5,0,undefined d) 5,null,undefined

2. Web applications are frequently constructed as a distributed system utilizing a multitiered architecture with three tiers. They are:
    1. a) Browser, Server, Database
    2. b) Model,View, Controller

    c) Browser,Service,Database d) Model,View,Service

3. Which selector is used by applying a specific style for a group of elements?

    a)class

    b)style c)h1 d)id

4. Which method is used to remove the first element of an Array object? a)pop()

    b)push()

    c)shift()

    d)unshift()

5. Which of these methods returns x ,rounded downwards to the nearest integer?

a)ceil()

b)floor()

c)abs() d)round()

6. Where in an HTML document is the correct place to refer to an external style sheet?

1. a) At the top of the document
2. b) At the end of the document
3. c) In the <body> section
4. d) In the <head> section

7. Which is the correct CSS syntax?

a) body:color=black
b) {body;color:black}
c) {body:color=black(body} d) body {color: black}

8. What is the correct CSS syntax for making all the <p> elements bold?

1. a) <p style="text-size:bold">
2. b) <p style="font-size:bold">
3. c) p {font-weight:bold}
4. d) p {text-size:bold}

9. To link your Web page to a style sheet, you must use the _____ tag.

a) <STYLESHEET> b) <STYLE>
c) <LINK>
d) <WEB>

10.How can you create an e-mail link?

1. a) <a href="mailto:xxx@yyy">
2. b) <mail href="xxx@yyy">

c) <mail>xxx@yyy</mail>

d) <a href="xxx@yyy">

Which of these tags are all <table> tags? A. <table><head><tfoot>
B. <thead><body><tr>
C. <table><tr><td>

D. <table><tr><tt> ANSWER: C

How can you make a list that lists the items with numbers? A. <list>
B.
C.

D. <dl>
ANSWER: B
Choose the correct HTML to left-align the content inside a tablecell A. <tdleft>
B. <td leftalign>

C. <td valign="left"> D. <td align="left"> ANSWER: D
HTTP is

A. a network layer protocol
B. an application layer protocol
C. a transport layer protocol
D. a network interface layer protocol
ANSWER: B
Click.This code
A. Opens a blank window
B. Opens 1.html in the same window
C. Opens 1.html in new window
D. Opens default page in new window
ANSWER: C
In HTTP, which method gets the resource as specified in the URI
A. GET
B. POST
c. PUT
D. TRACE
ANSWER: A
Which of these is not a valid attribute of <tr> element?
A. valign
B. bgcolor
C. align
D. rowspan
ANSWER: D
Which attribute is used to specify the path of the image in <img> element? A. href
B. src
C. path
D. link
ANSWER: B