Yashwantrao Chavan college of Science, karad

B. Sc. Computer Science Entire Part-II (Sem.-III)

Subject : ELECTRONICS

Paper V - Computer Organization

Question Bank

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Q.1 Select Correct Alternative for Each of The Following questions.

1)Which of the following operations is/are performed by the ALU?

A)Data manipulation B)Exponential

C)Square root D)All of the above

2)Which of the following format is used to store data?

A)Decimal B)Octal C)BCD D) Hexadecimal

3)Which of the following circuit is used to store one bit of data?

A)Flip Flop B) Decoder C) Encoder D)Register

4) Which of the following circuit convert the binary data into a decimal?

A)Decoder B) Encoder C) Code converter D)Multiplexer

5) Which of the following memory unit communicates directly with the CPU?

A)Auxiliary memory B)Main memory

C) Secondary memory D)None of the above

6) The collection of 8-bits is called as -

A)Byte B)Nibble C) Word D)Record

7)Where is the document temporarily stored during working on a document on PC?

A)ROM B) CPU C) RAM D) Flash memory

9) Where is the decoded instruction stored?

A) Registers B)MDR C) PC D) IR

10) The Program Counter is also called as -

A)Instruction Pointer B)Data Counter

C)Memory pointer D)None of the above

11)Which of the following topology is used in Ethernet?

A) Ring topology B)Bus topology

C)Mesh topology D)Star topology

12)Which of the following is correct about memory and storage?

A)Memory is temporary, Storage is temporary

B)Memory is temporary, Storage is permanent

C)Memory is permanent, Storage is temporary

D)Memory is slow, Storage is Fast

13)What does one thousand bytes represent?

A)Kilobyte (KB) B)Megabyte (MB)

C)Gigabyte (GB) D)Terabyte (TB)

14)What is the content of stack pointer (SP)?

A)Address of the top element in the stack
B) Address of current instruction
C).Address of next instruction
D)None of the above

15)Which of the following is the fastest means.of memory access for CPU?
A)Registers B)Cache C)Main memory D) Virtual Memory

16)The memory implemented using the semiconductor chips is _____
A)Cache B)Main C)Secondary D) Registers

17)Size of the _____ memory mainly depends on the size of the address bus.
A)Main B)Virtual C)Secondary D) Cache

18) MAR stands for _____

A) Memory address register B)Main address register

C) Main accessible register D) Memory accessible register

19)The fastest data access is provided using _____

A) Caches B)DRAM's

C) SRAM's D) Registers

20)In memory-mapped I/O _____

A) The I/O devices and the memory share the same address space

B) The I/O devices have a separate address space

C) The memory and I/O devices have an associated address space

D) A part of the memory is specifically set aside for the I/O operation

21)The advantage of I/O mapped devices to memory mapped is _____

A) The former offers faster transfer of data

B) The devices connected using I/O mapping have a bigger buffer space

C) The devices have to deal with fewer address lines

D) No advantage as such

22)What is computer organization?

A) structure and behavior of a computer system as observed by the user

B) structure of a computer system as observed by the developer

C) structure and behavior of a computer system as observed by the developer

D) All of the mentioned

23)Which of the following is a type of computer architecture?

A) Micro architecture

B) Harvard Architecture

C) Von-Neumann Architecture

D) All of the mentioned

24)Which of the architecture is power efficient?

A) RISC

B) ISA

C) IANA

D) CISC

25)In CISC architecture most of the complex instructions are stored in _____

A) CMOS B) Register

C) Transistors D) Diodes

Q2) Long Answer questions

1) design binary to gray convertor using k-map
2) Design gray to binary convertor using k-map
3) Design 2 bit of synchronous up counter using k-map
4) what is memory hierarchy? explain its types
5) Explain memory mapping techniques
6) what is need of interface? Explain modes of data transfer
7) What is serial communication? explain synchronous and asynchronous data transmission
8) Explain paging and segmentation concept in detail
9) Explain UART with its block diagram
10) Explain Stack organization
11) Explain instruction format
12) Explain address format (zero, one, two, three)
13) Explain Logical and arithmetic unit of CPU

Q3) Short answer questions

1) Explain digital comparator
2) Explain concept of excitation table
3) Explain characteristics of memory systems
4) Explain concept of cache memory
5) Explain concept of virtual memory
6) Write a short note on paging
7) write a short note on segmentation
8) Write a short note on USB storage devices
9) What is need of interface?
10) Explain I/O mapped I/O
11) Explain memory mapped I/O
12) Explain input output interface
13) Explain asynchronous data transmission
14) What is DMA? Explain it
15) What is serial communication?
16) Explain synchronous data transmission
17) Explain general register organization
18) Give difference between RISC and CISC
19) Explain concept of pipeline
20) Explain concept of bit processor