**SET B**

**MCQ (1x30=30)**

Qn1. Gate whose output is 0 only when inputs are different is called

1. XOR
2. XNOR
3. NOR
4. NAND

Qn 2. In binary number system, first digit bit from right to left is termed as

1. LSB
2. MSB
3. RSB
4. YSB

Qn 3. Truth table is used to represent

1. linear expression
2. Boolean expression
3. differential expression
4. integral expression

|  |  |
| --- | --- |
| Qn4.. | Upgrading the BIOS is also known as \_\_\_\_\_\_\_\_. |
| **1.** | UROMing |
| **2.** | smoothing |
| 3. | flashing |
| 4. | forcing |
| Qn5.**.** | What does a computer use to permanently store programs and data when it is turned off? |
| **1.** | hard drive |
| **2.** | EPROM |
| **3.** | RAM |
| **4.** | ROM |
| Qn6**.** | When seeking to upgrade for a particular motherboard what do you need to know? |
| **1.** | memory |
| **2.** | hard drive |
| **3.** | make & model |
| **4.** | dimm |

Qn 7. Hexadecimal number 19FDE is equals to base 10 number system

1. 106462
2. 100462
3. 116462
4. 110222

Qn 8. Decimal number 46 in excess 3 code =

1. 1000 1001

2. 0111 1001

3. 0111 1111

4. 1000 1111

Qn 9. An OR gate with schematic “bubbles” on its inputs performs the same functions as a(n)\_\_\_\_\_\_\_\_ gate.

1. NOR

2. OR

3. NOT

4. NAND

Qn 10. Use Boolean algebra to find the most simplified SOP expression for F = ABD + CD + ACD + ABC + ABCD.

1. F = ABD + ABC + CD

2. F = CD + AD

3. F = BC + AB

4. F = AC + AD

Qn 11. The NAND or NOR gates are referred to as “universal” gates because either:

1. can be found in almost all digital circuits

2. can be used to build all the other types of gates

3. are used in all countries of the world

4. were the first gates to be integrated

Qn 12. The minimum number of address lines needed for a 64K memory is \_\_\_\_\_\_\_\_.

1. 10

2. 12

3. 14

4. 16

Qn 13. How many 8 k × 1 RAMs are required to achieve a memory with a word capacity of 8 k and a word length of eight bits?

1. Eight

2. Four

3. Two

3. One

Qn 14. The ideal memory \_\_\_\_\_\_\_\_.

1. has high storage capacity

2. is nonvolatile

3. has in-system read and write capacity

4. has all of the above characteristics

Qn 15. Dynamic memory cells store a data bit in a \_\_\_\_\_\_\_\_.

1. diode

2. resistor

3. capacitor

4. flip-flop

Qn 16. An 8-bit address code can select \_\_\_\_\_\_\_\_.

1. 8 locations in memory

2. 256 locations in memory

3. 65,536 locations in memory

4. 131,072 locations in memory

Qn 17. A computer program that converts an entire program into machine language at one time   
 is called a/an……………………

1. Interpreter

2. CPU

3. Compiler

4. Simulator

|  |
| --- |
| Qn 18.Which Motherboard form factor uses one 20 pin connector? |
| 1. ATX |  |
| 2.AT |  |
| 3.Baby AT |  |
| 4. All of Above |  |

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| Qn 19.Boards that are used to connect additional devices to the motherboard are called |
| 1. Bay Cards |  |
| 2.Port Cards |  |
| 3. Expansions card |  |
| 4.Bus cards |  |

|  |  |
| --- | --- |
| Qn20**.** | Which of the following handles the interconnection between most of the devices and the CPU? |
| **1.** | Northbridge |
| **2.** | RAM |
| **3.** | ROM |
| **4.** | Southbridge |

|  |  |
| --- | --- |
| Qn21**.** | How can you easily clear the CMOS, including clearing the password? |
| **1.** | Unplug the PC |
| **2.** | Unplug the PC and remove the CMOS battery |
| **3.** | Issue a ClearCMOS command from the command line |
| **4.** | This can’t be done |

|  |  |
| --- | --- |
| Qn 22 | ………….. Connects the computer to the network media. |
| **1.** | Cable |
| **2.** | Hub |
| **3.** | NIC |
| **4.** | Terminator |

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| Qn 23.A Personal Computer uses a number of chips mounted on a circuit board called |
| 1. Microprocessor |  |
| 2. System Board |  |
| 3. Daughter board |  |
| 4. Motherboard |  |

|  |
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| Qn 24.Which one of the following is not an operating system? |
|  |
| 1. Mac OS. |
| 2. Linux. |
| 3. Norton. |
| 4. Windows XP. |

Qn 25. Devices that are controlled by central processing unit but are not a part of it are called

1. peripheral devices
2. arithmetic units
3. control unit devices
4. main store devices

Qn 26. Silicon piece with a system circuit on it is termed as

1. chip
2. circuit
3. logical gate
4. circuit network

Qn 27. Circuits that employs memory elements in addition to gates is called

1. combinational circuit
2. sequential circuit
3. combinational sequence
4. series

Qn 28. Besides NAND gate universal gate is

1. AND gate
2. OR gate
3. NOR gate
4. XOR gates

Qn29. A 64-bit word consists of \_\_\_\_\_\_\_\_.

1. 4 bytes

2. 8 bytes

3. 10 bytes

4. 12 bytes

Qn30. Address location in main memory, is referred to as

1. Logical address
2. Physical address
3. Static address
4. Block associative

**Short answers questions (5x6=30)**

Qn1. Why do computer need High Level language? Differentiate between compiler and interpreter.

Qn2. What is BIOS? Explain how it works? What are the functions of BIOS?

Qn3. Draw the von Neumann architecture? Explain the generations of computers?

Qn4. Explain the Combinational and Sequential circuits with neat diagram?

Qn5. Why CPU is called the brain of computer? Explain the architecture of CPU?

.

**Long questions (2x10=20)**

1.

a. What is Virtual memory? Why do we need virtual memory? Explain how the virtual memory works with neat diagram? (10)

b. What is Primary memory? What are the characteristics of memory? Draw the memory hierarchy structure? (10)

2.

a. What is number system? Explain the different types of number systems with examples?(10)

b. Write the algorithm to convert Gray code to binary and vice versa with examples.(10)