Standard Questions

Integrated Circuit

1. What is an integrated circuit (I(C)?
   (a) A large, individual transistor
   (b) A small electronic device made of a semiconductor material containing many transistors and other components
   (c) A large capacitor
   (d) A type of battery
2. Which material is most commonly used to manufacture ICs?
   (a) Copper (b) Silicon
   (c) Iron (d) Aluminum
3. What does the term "SSI" stand for in the context of integrated circuits?
   (a) Small-Scale Integration
   (b) Super-Scale Integration
   (c) Single-Scale Integration
   (d) Simple-Scale Integration
4. What is the main advantage of using integrated circuits?
   (a) They consume more power
   (b) They are larger in size
   (c) They increase the reliability of electronic devices
   (d) They decrease the reliability of electronic devices
5. Which of the following is an application of integrated circuits?
   (a) Digital watches (b) Microprocessors
   (c) Memory chips (d) All of the above
6. What does "VLSI" stand for?
   (a) Very Large-Scale Integration
   (b) Very Low-Scale Integration
   (c) Variable Large-Scale Integration
   (d) Virtual Large-Scale Integration
7. Which type of IC is designed for a specific task or function?
   (a) Analog IC
   (b) Digital IC
   (c) Microcontroller
   (d) Application-Specific Integrated Circuit (ASIC)
8. Which component in an IC controls the operation of the entire circuit?
   (a) Resistor (b) Capacitor
   (c) Transistor (d) Inductor
9. What is the primary purpose of using a heat sink with an IC?
   (a) To increase the voltage
   (b) To decrease the current
   (c) To dissipate heat generated by the IC
   (d) To store electrical energy
10. Which type of IC is used for signal processing applications?
    (a) Analog IC (b) Digital IC
    (c) Mixed-signal IC (d) Memory IC
11. What is the main difference between analog and digital ICs?
    (a) Analog ICs process continuous signals; digital ICs process discrete signals
    (b) Analog ICs process discrete signals; digital ICs process continuous signals
    (c) Analog ICs are used in computers; digital ICs are used in audio devices
    (d) Analog ICs are larger than digital ICs
12. Which process is primarily used in the fabrication of ICs?
    (a) Welding (b) Soldering
    (c) Lithography (d) Casting
13. What is the function of a microcontroller in an embedded system?
    (a) To store data permanently
    (b) To control the operation of other components
    (c) To supply power to the system
    (d) To amplify signals
14. Which type of memory is typically used in ICs for temporary data storage?
    (a) ROM (b) Flash memory
    (c) RAM (d) EEPROM
15. In which generation of computers did integrated circuits first appear?
    (a) First generation
    (b) Second generation
    (c) Third generation
    (d) Fourth generation

Answer Key

1	B	11	A
2	B	12	C
3	A	13	B
4	C	14	C
5	D	15	C

6	A		
7	D		
8	C		
9	C		
10	C		

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