

## Chapter 6.0 Hamtronics

### Section 6.7 ICs and Computers

G6B01 (D) p.233

Which of the following is an analog integrated circuit?

- A. NAND Gate
- B. Microprocessor
- C. Frequency Counter
- D. Linear voltage regulator

G6B02 (B) p.237

What is meant by the term MMIC?

- A. Multi Megabyte Integrated Circuit
- B. Monolithic Microwave Integrated Circuit
- C. Military Manufactured Integrated Circuit
- D. Mode Modulated Integrated Circuit

G6B03 (A) p.234

Which of the following is an advantage of CMOS integrated circuits compared to TTL integrated circuits?

- A. Low power consumption
- B. High power handling capability
- C. Better suited for RF amplification
- D. Better suited for power supply regulation

G6B04 (B) p.238

What is meant by the term ROM?

- A. Resistor Operated Memory
- B. Read Only Memory
- C. Random Operational Memory
- D. Resistant to Overload Memory

G6B05 (C) p.238

What is meant when memory is characterized as non-volatile?

- A. It is resistant to radiation damage
- B. It is resistant to high temperatures
- C. The stored information is maintained even if power is removed
- D. The stored information cannot be changed once written

G6B06 (D) p.233

What kind of device is an integrated circuit operational amplifier?

- A. Digital
- B. MMIC
- C. Programmable Logic
- D. Analog

G6B09 (A) p.238

Which of the following is a characteristic of a liquid crystal display?

- A. It requires ambient or back lighting
- B. It offers a wide dynamic range
- C. It has a wide viewing angle
- D. All of these choices are correct

G6B10 (A) p.240

What two devices in an Amateur Radio station might be connected using a USB interface?

- A. Computer and transceiver
- B. Microphone and transceiver
- C. Amplifier and antenna
- D. Power supply and amplifier

G6B11 (B) p.237

What is a microprocessor?

- A. A low power analog signal processor used as a microwave detector
- B. A computer on a single integrated circuit
- C. A microwave detector, amplifier, and local oscillator on a single integrated circuit
- D. A low voltage amplifier used in a microwave transmitter modulator stage

G6B12 (D) p.240

Which of the following connectors would be a good choice for a serial data port?

- A. PL-259
- B. Type N
- C. Type SMA
- D. DE-9

G6B14 (C) p.240

Which of these connector types is commonly used for audio signals in Amateur Radio stations?

- A. PL-259
- B. BNC
- C. RCA Phono
- D. Type N

G6B15 (B) p.239

What is the main reason to use keyed connectors instead of non-keyed types?

- A. Prevention of use by unauthorized persons
- B. Reduced chance of incorrect mating
- C. Higher current carrying capacity
- D. All of these choices are correct

G6B17 (C) p.240

What is the general description of a DIN type connector?

- A. A special connector for microwave interfacing
- B. A DC power connector rated for currents between 30 and 50 amperes
- C. A family of multiple circuit connectors suitable for audio and control signals
- D. A special watertight connector for use in marine applications

G7B01 (A) p.237

Complex digital circuitry can often be replaced by what type of integrated circuit?

- A. Microcontroller
- B. Charge-coupled device
- C. Phase detector
- D. Window comparator

G7B02 (A) p.234

Which of the following is an advantage of using the binary system when processing digital signals?

- A. Binary "ones" and "zeros" are easy to represent by an "on" or "off" state
- B. The binary number system is most accurate
- C. Binary numbers are more compatible with analog circuitry
- D. All of these choices are correct

G7B03 (B) p.235

Which of the following describes the function of a two input AND gate?

- A. Output is high when either or both inputs are low
- B. Output is high only when both inputs are high
- C. Output is low when either or both inputs are high
- D. Output is low only when both inputs are high

G7B04 (C) p.235

Which of the following describes the function of a two input NOR gate?

- A. Output is high when either or both inputs are low
- B. Output is high only when both inputs are high
- C. Output is low when either or both inputs are high
- D. Output is low only when both inputs are high

G7B05 (C) p.237

How many states does a 3-bit binary counter have?

- A. 3
- B. 6
- C. 8
- D. 16

G7B06 (A) p.237

What is a shift register?

- A. A clocked array of circuits that passes data in steps along the array
- B. An array of operational amplifiers used for tri-state arithmetic operations
- C. A digital mixer
- D. An analog mixer

G7B07 (D) p.234

What are the basic components of virtually all sine wave oscillators?

- A. An amplifier and a divider
- B. A frequency multiplier and a mixer
- C. A circulator and a filter operating in a feed-forward loop
- D. A filter and an amplifier operating in a feedback loop