

2.1 If the digital circuits in a computer only respond to binary numbers, why are octal and hexa- decimal numbers used extensively by computer specialists?

FTCc ELE2053 Week#2 Homework Chapter 2
Numbers we use in Digital Electronics

Name:

Date:

2.2 In a digital system such as a microcomputer, it is common to consider an 8-bit group (called a byte) as having a meaning. Predict some of the possible meanings of a byte (such as 110110112) in a microcomputer.

2.3 At the option of your instructor, use circuit simulation software to (a) draw the logic diagram of the decimal-to-binary encoder circuit sketched in Fig. 2-17, (b) operate the circuit, and (c) demonstrate the decimal-to-binary encoder simulation to your instructor.

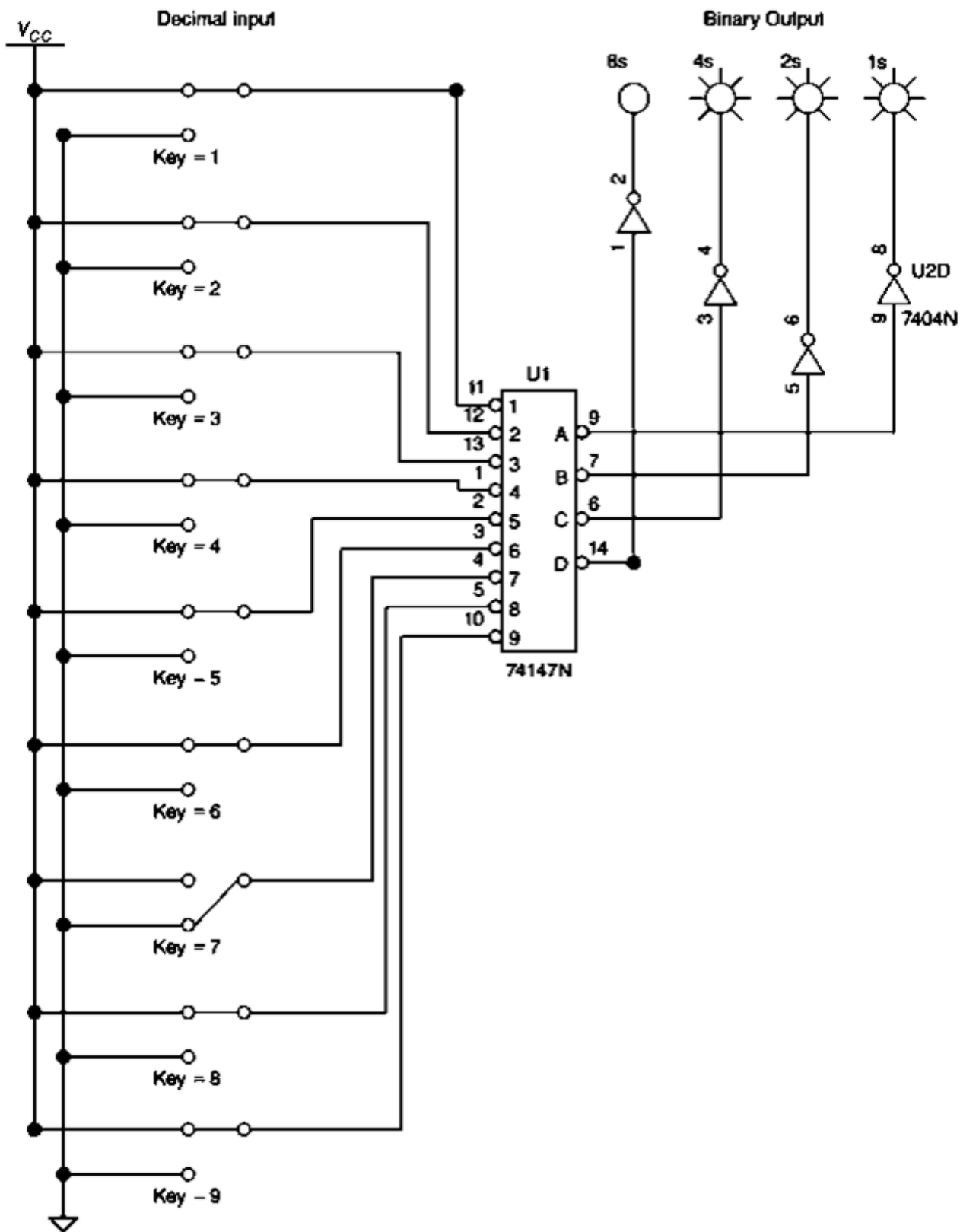


Fig. 2-17 Decimal-to-binary encoder circuit.

2.4 At the option of your instructor, use circuit simulation software to (a) draw the logic diagram of the binary-to-decimal decoder circuit shown in Fig. 2-18, (b) operate the circuit, and (c) demonstrate the binary-to-decimal decoder simulation to your instructor.

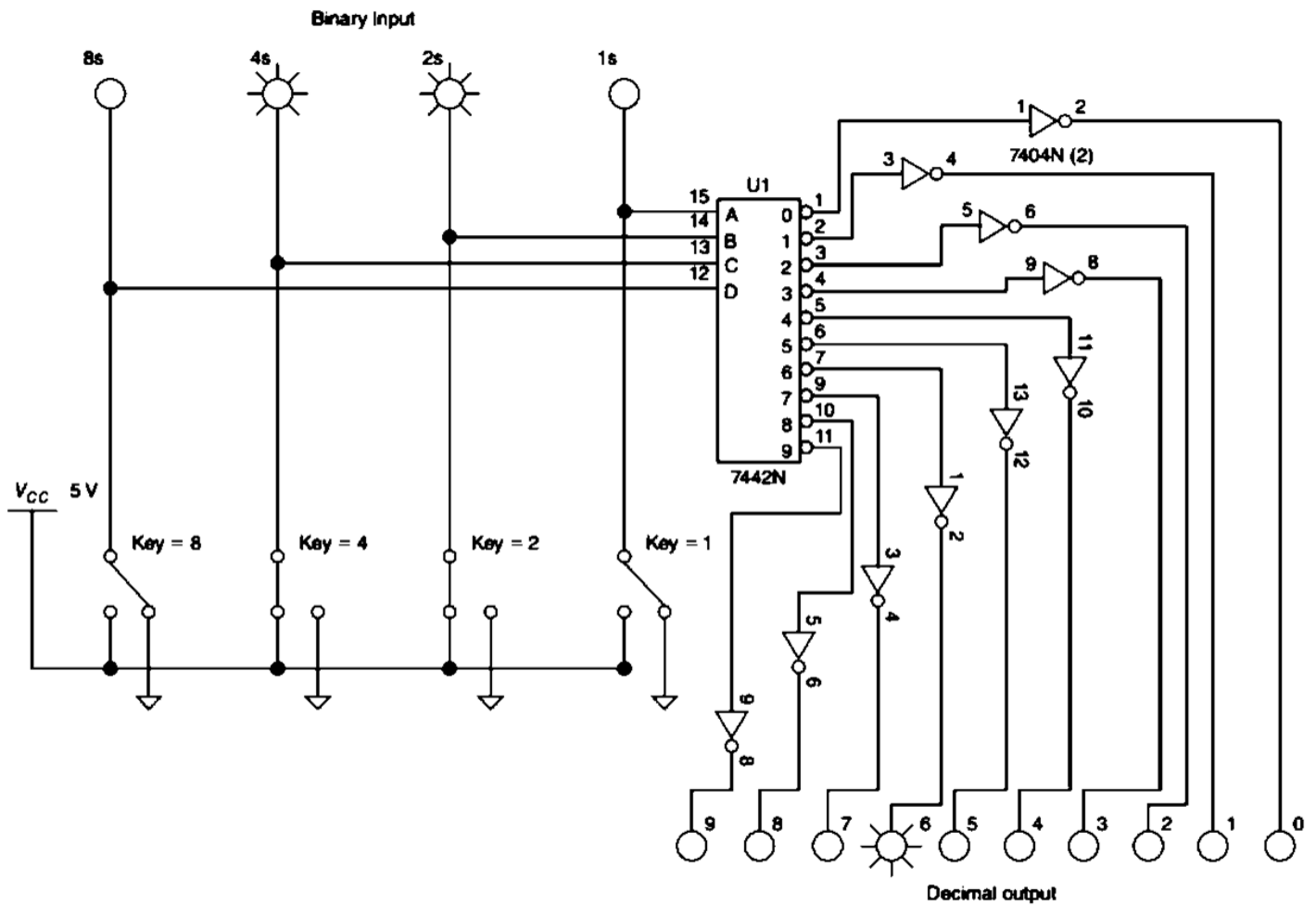


Fig. 2-18 Binary (BCD)-to-decimal decoder circuit.

2.5 At the direction of your instructor, use a scientific calculator to convert from one number system to another. Show the instructor your procedure and results.

2.6 At the direction of your instructor, use a website to convert from one number system to another. Show the instructor your results.

