Chương 1: Number systems and codes

Dạng 1: Dạng dữ liệu biểu diễn trên máy tính.

1.31 How many printing characters are there in ASCII? How many of them are special char-acters (not letters or numberals)?

Dạng 2: Các Đơn vị đo dữ liệu (bits, byte, word,…)

1.2\* What is the exact number of bytes in a system that contains

a.32K bytes

b.64M bytes

c.6.4G bytes

1.32 What bit must be complemented to change an ASCII letter from capital to Lowercase and vice versa?

Dạng 3: So sánh sự khác nhau giữa ngôn ngữ bậc cao và bậc thấp

Dạng 4: Các thành phần trong máy tính Computer (CPU, RAM, HĐ,BUS,…)

Dạng 5: Chuyển đổi qua lại giữa các hệ đếm

**1.12** Add and multiply the following numbers without converting them to decimal.

(a) Binary numbers 1011 and 101.

(b) Hexadecimal numbers 2E and 34.

1.13 Do the following conversion problems:

(a) Convert decimal 27.315 to binary.

(b) Calculate the binary equivalent of 2/3 out to eight places. Then convert from binary to decimal. How close is the result to 2/3

(c) Convert the binary result in (b) into hexadecimal. Then convert the result to decimal. Is the answer the same?

1.24 Formulate a weighted binary code for the decimal digits, using the following weights:

(a) 6,3,1,1

(b) 6,4,2,1

Dạng 6: Bù 1, Bù 2.

1.19 The following decimal numbers are shown in sign-magnitude form: +9,286 and +801. Convert them to signed-10’s-complement form and perform the following operations ( note that the sum is +10,627 and requires five digits and a sign)

1. (a)(+9,286) + (+801)
2. (+9,286) +(-801)
3. (-9,296) + (-801)