

## Exercise 7. Answer Sheet

Student's Name: Tsuyoshi Kumamoto

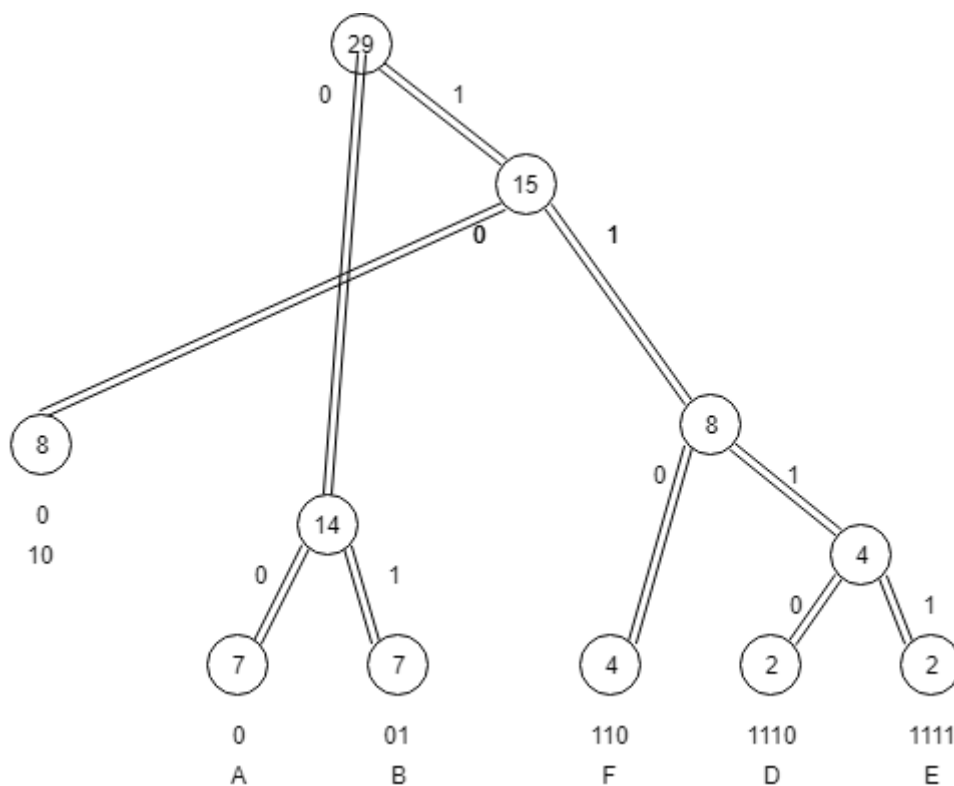
Student's ID: s1250050

**Problem 1.** (20 point) Consider following sequence of letters:

ABBACACCEACBCCFABCDAFEABFFADBBC

a) (10 points) Construct Huffman encoding tree for the above sequence and show it below

Put your answer here



b) (10 points) What is the code for each letter:

A:0  
B:01  
C:10  
D:1110  
E:1111  
F:110

**Problem 2.** (25 points) What is the Huffman code for the following set of frequencies, based on the first 8 Fibonacci numbers?

A: 1, B: 1, C: 2, D: 3, E: 5, F: 8, G: 13, H: 21

A:11111110

B:1111110

C:111110

D:11110

E:1110

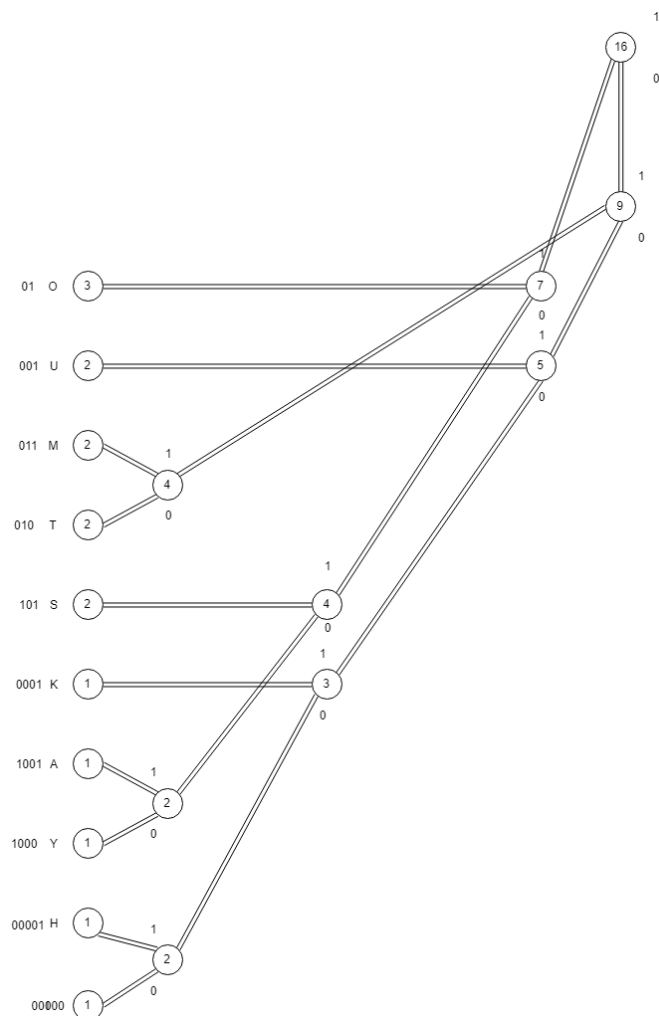
F:110

G:10

H:0

**Problem 3.** (15 points) Write your name in English letters and construct Huffman tree and code for it. Show your tree and code below.

TSUYOSHI KUMAMOTO



O:01 U:001 M:011 T:010 S:101 K:0001 A:1001 Y:1000 H:00001 I:00000

**Problem 4.** (40 points) Make a program implementing Huffman encoding. Upload your code with usage example.