

Introduction to Electronic Design Automation

Spring 2011

National Taiwan University

Problem Set 4

Due by 06/17/2011 noon

(please drop your solution in the instructor's mailbox in EE2 building)

1 [Partition]

[10%] Given an undirected graph $G = (V, E)$, let $V = \{a, b, c, d, e\}$ with weighted connections as shown in the table below. Suppose the vertices are initially partitioned into $\{a, b, c\}$ and $\{d, e, f\}$. Apply the Kernighan-Lin algorithm to find a good partition. Show intermediate steps.

	a	b	c	d	e	f
a	0	1	1	2	4	0
b	1	0	3	1	0	1
c	1	3	0	2	2	3
d	2	1	2	0	3	0
e	4	0	2	3	0	1
f	0	1	3	0	1	0

2 [Floorplanning]

Exercise 10.1. (24%)

3 [Routing]

Exercises 12.3 (4%), 12.6 (16%).

4 [Testing]

Exercises 14.1 (5%), 14.2 (5%), 14.3 (6%), 14.4 (12%), 14.11 (6%), 14.13 (12%).