

THE HONG KONG POLYTECHNIC UNIVERSITY
HONG KONG COMMUNITY COLLEGE

Subject Title : Operations Research for Business **Subject Code** : CCN3139

Session : Semester Two, 2013/14

Numerical Answers

Question B1

a) Optimal solution: $X_1 = 12, X_2 = 45$

$X_1=13, X_2=44$

$X_1=14, X_2=43$

$X_1=15, X_2=42$

b) shortest route: 1-4-7-10-13

Total distance = 322

Question B2

a) Value of game = $-51/11$

b) $\theta \geq \frac{5}{3}$

Question B3

Optimal solution:

Invest \$10000 in A.

The expected amount of money by the end of third year will be \$22000.

Question B4

a) Critical path: ACGJK

Expected duration: 41 weeks

b) Total crash cost = \$4633.33