

Department of Electrical & Electronic Engineering

ELEC97094/ELEC97095 Wireless Communications

Evaluation Form - Coursework 3

Name of Student: Zhaolin Wang

Overall Grade: A+

1. Q1 (10%)

A\* ☐ A ☐ B ☐ C ☐ D ☐ E ☐

1. Q2 (10%)

A\* ☐ A ☐ B ☐ C ☐ D ☐ E ☐

1. Q3 (10%)

A\* ☐ A ☐ B ☐ C ☐ D ☐ E ☐

1. Q4 (10%)

A\* ☐ A ☐ B ☐ C ☐ D ☐ E ☐

1. Q5 (10%)

A\* ☐ A ☐ B ☐ C ☐ D ☐ E ☐

1. Q6 (10%)

A\* ☐ A ☐ B ☐ C ☐ D ☐ E ☐

**CW3 Oral (40% of CW3 mark)**

1. Understanding of coursework 3 (25%)

A\* ☐ A ☐ B ☐ C ☐ D ☐ E ☐

1. Understanding of coursework 1 and 2 (15%)

A\* ☐ A ☐ B ☐ C ☐ D ☐ E ☐

**Bonus (extra 30% on CW3 marks)**

1. Q7 (15%)

A\* ☐ A ☐ B ☐ C ☐ D ☐ E ☐

1. Q8 (15%)

A\* ☐ A ☐ B ☐ C ☐ D ☐ E ☐

**Comments:**

Q1. Very clear system model.

Q2. The CDF simulation result is not correct.

The shadowing of different BS’s channels need to be independent from each other.

Q3. Good.

When SINR becomes higher, the nr = 2 condition tends to multiple eigenmode transmission to obtain a larger rate. The gap between these two situations will increase as the SINR grows.

Q4. Very good.

Q5. Due to multi-user diversity, the average rate of each user should be slightly higher than halved as K gets doubled.

Q6. Very good.

B1. Good job. You can also investigate the multiplexing gain.

B2. Very good.