

THE HONG KONG POLYTECHNIC UNIVERSITY  
HONG KONG COMMUNITY COLLEGE

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**Subject Title** : Business Economics

**Subject Code** : CCN2105

**Session** : Semester Two, 2017/18

**Numerical Answers**

**Question B2**

(a)  $Q_X = 22,000 - 2.5(450) + 4(40) - 1(20,000) + 1.5(3,000) = 5,535$

$$E_{Q_x, P_x} = -2.5 \frac{P_x}{Q_x} = -2.5 \left( \frac{450}{5,535} \right) = -0.203.$$

**Question D1**

- (a)  $P=20 - 0.5Q$ ,  $TR = 20Q - 0.5Q^2$ ,  $MR = 20 - Q$   
 $C(Q) = 4Q$ ,  $MC = 4$   
Profit-maximizing quantity :  $MR = MC$ ,  $20 - Q = 4$ ,  $Q=16$   
Profit-maximizing price:  $P = 20 - 0.5(16) = \$12$   
Profit =  $TR - TC$ ,  $\$12 \times 16 - 4 \times 16 = \$128$
- (b) The profit =  $\$384 - \$4 \times 32 = \$256$
- (c)(ii) The profit will be reduced to  $\$126$  ( $\$256 - \$130$ )

**Question D2**

- (b) Buyers cannot tell the difference between two types of Feng Shui masters so the maximum mean price they will offer initially is  $(\$12,000 \times 0.2) + (\$5,000 \times 0.8) = \$6,400$ .