

THE HONG KONG POLYTECHNIC UNIVERSITY
HONG KONG COMMUNITY COLLEGE

Subject Title : Fundamentals of Operations Management

Subject Code : CCN2283

Session : Semester One, 2018/19

Numerical Answers

Question B1

(a)
$$\sqrt{\frac{2 \times 100,000 \times 750}{5.00(1 - 400/2000)}} = 6124 \text{ units.}$$

(b) There will be $100,000 / 6124 = 16$ cycles per year.

Question B2

(a) $705 + 0.483 \times 17 = 713$

(b) $705 - 0.483 \times 17 = 697$

(c) $2.004 \times 17 = 34$

(d) $0 \times 17 = 0$

Question B3

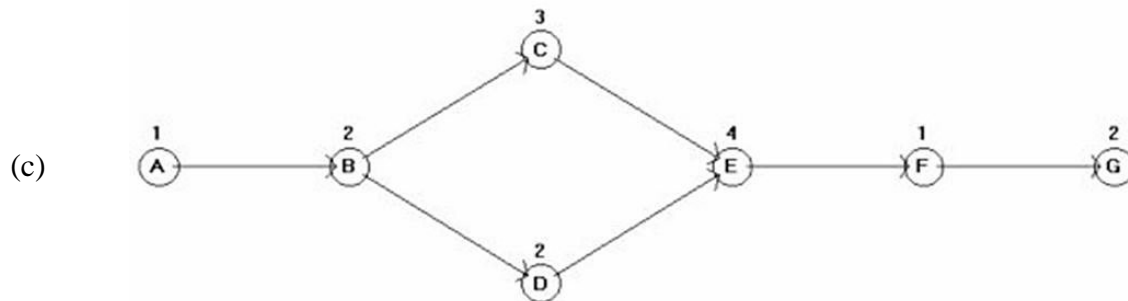
$$x\text{-coordinate} = (30)(150) + (20)(350) + (10)(100) + (50)(200) / (150 + 350 + 100 + 200)$$
$$= 28$$

$$y\text{-coordinate} = (30)(150) + (10)(350) + (70)(100) + (50)(200) / (150 + 350 + 100 + 200)$$
$$= 31$$

Question B4

(a) $480 \text{ minutes per day} / 80 \text{ ovens} = 6 \text{ minutes/oven}$

(b) $15 / 6 = 3$



Question B5

$$(2 \times 42) + (3 \times 47) + (4 \times 43) / 4 + 3 + 2 = 397 / 9 = 44$$

Question B6

$$800^2 / 600^2 = 640,000 / 360,000 = 2$$