

THE HONG KONG POLYTECHNIC UNIVERSITY
HONG KONG COMMUNITY COLLEGE

Subject Title : Architectural Technology in the Built Environment **Subject Code** : CCN2262

Session : Semester One, 2017/18

Numerical Answers

Question B1

- (a) $10 \text{ m}^3/\text{s}$, $k = 8$
- (b) 25.5490°C
- (c) 1.1459 ach
- (d) 90.1563 kW
- (e) 1078.32 ppm
- (g) 117.9772 kW

Question C1

- (a) 1.15 g
- (c) 17.5 g

Question C2

- (a) $6.3 \text{ W}/\text{m}^2\text{C}$
- (b) 194.4 W
- (c) $0.5339 \text{ W}/\text{m}^\circ\text{C}$
- (e) -4.1005°C

Question C3

- (a) 94.7700 lm/W
- (b) 603324.5272 cd
- (c) 6025.1095 lux
- (d) 3

Question C4

- (a) 5054.4 kWh
- (b) 15000 lux
- (c) 3.3333%
- (d) 4212 kWh

Question C5

- (a) -0.2
- (b) 5.829474%
- (c) 61.2 W/m^2 , 61.8901 W/m^2

Question C6

- (a) 22.4937 m^2
- (b) 0.2367
- (c) 0.3925 s
- (d) 79.4501 dB

Question C7

- (a) $1470.6 \text{ MJ/m}^2/\text{annum}$
- (b) 1481872 kWh