

系所組：建築及都市設計學系碩士班

日期節次：101 年 3 月 17 日第 2 節 10:30~12:00

科目：環境控制與建築科學

1. Terminology (60%) 每題4分

- (1) RH
- (2) \dot{c}_l
- (3) ET
- (4) PET
- (5) decipol
- (6) envelope flows
- (7) infiltration rate
- (8) air change rate
- (9) ventilation
- (10) discharge coefficient
- (11) mechanical ventilation
- (12) buoyancy effect
- (13) heat island intensity
- (14) wind driven ventilation
- (15) natural ventilation

2. Please explain the green building labeling system of EEWH. The answer should include the meaning of EEWH (10%) and the details of each dimension. (10%)

3. Please explain the thermal balance equation of human body and indicate the meaning of each parameter considered within the equation. (10%)

4. There is a room of dimension 3 m high, 4 m wide and 4 m deep. The pressure across the opening is 3 Pa. If the air density is 1.2 kg/m^3 and the requirement of air change rate is 3 times per hour, please calculate the opening area for the conditions given above. (10%)