

國立成功大學

112學年度碩士班招生考試試題

編 號： 279

系 所： 環境醫學研究所

科 目： 作業環境測定

日 期： 0207

節 次： 第 3 節

備 註： 不可使用計算機

※ 考生請注意：本試題不可使用計算機。 請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

1. Please briefly describe the definition of the followings:

- (1) Similar exposure group (SEG) (5%)
- (2) Random sampling (5%)
- (3) Total coefficient of variation (CV_T) (5%)
- (4) Control banding (5%)
- (5) Biological monitoring (5%)

2. Worker A's (weight= 60kg) exposure scenarios are described as followings:

- Exposed conc.: 1 mg/m³
- Workshift: 8 hrs/day
- Breathing rate: 20 L/min
- Job duration: 5 days/week, 48 weeks/year, 5 years

Assuming:

- Contaminant permanently retained by the body: 50%

Please calculate the Normalized absorber dose per day and Absorbed dose at the end of 5 years for worker A. (25%)

3. Please briefly describe the "well-mixed box model". If it is used for conducting exposure assessment, what are its limitations? (25%)

4. Please design a sampling strategy for assessing workers' free silica exposures. (25%)