

※ 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 explain the definition of the followings:

- (1) Active sampling (5%)
- (2) Integrated sampling (5%)
- (3) Systemic error (5%)
- (4) Health risk assessment (5%)

2. As an industrial hygienist, please explain how to draw a written environmental monitoring program for your company? (20%)

3. A charcoal tube was used to conduct a personal sampling for a worker exposed to toluene (PEL-TWA=100ppm). If the sampling result, CV_A , and CV_P are 95 ppm, 0.03, and 0.04, respectively. Please assess the worker's exposure. (20%)

4. Please define the isokinetic, super-isokinetic, and sub-isokinetic sampling. (10%) And please also explain their effects on the aerosol aspiration efficiency of a thin-walled probe. (10%)

5. What is "Exposure modeling"? (5%) What is the role of "Exposure modeling" in the "Exposure assessment"? (5%) If the "Saturation pressure model" is used for conducting exposure assessment, what are its limitations? (10%)