

國立成功大學

113學年度碩士班招生考試試題

編 號：270

系 所：環境醫學研究所

科 目：工業衛生

日 期：0202

節 次：第 2 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. What is work-related carpal tunnel syndrome? (3%) List two occupations that are prone to work-related carpal tunnel syndrome. (4%) How could we prevent work-related carpal tunnel syndrome from happening? (3%)
2. An industrial hygienist took several ozone samples ($90 \mu\text{g}/\text{m}^3$, 0.1 ppm, $120 \mu\text{g}/\text{m}^3$, 0.2 ppm, and $50 \mu\text{g}/\text{m}^3$). What is the standard deviation for this dataset? (6%) What is the coefficient of variation for this dataset? (6%)
3. What is the assigned protection factor (APF)? (4%)
Please list the assigned protection factor (APF) from high to low for the following (8%):
(A) Full-face APR
(B) Self-Contained Breathing Apparatus (SCBA)
(C) Tight-fitting Powered Air Purifying Respirator (PAPR)
(D) Supplied air respirator
4. When conducting an exposure assessment, what are the primary sources of within-worker and between-worker variability? (10%)
5. What kind of sampler should be used to evaluate personal exposures in a food processing plant contaminated with bioaerosol? (4%) Please write your reason. (4%) How would you conduct the exposure assessment? (8%)
6. During cleaning, 5L of cleaning solvent evaporates entirely into the air during the 8-hour shift. The solvent density is 0.6 g/mL. What is the average emission rate for the solvent during the 8-hour period? (10%)
7. 請解釋以下名詞: (12%)
(1) TLV-C (3%) (2) 捕集風速(capture velocity) (3%)
(3) 溶劑空白樣品(solvent blank sample) (3%) (4) 浸透(permeation) (3%)
8. 防護手套性能評估需要考慮那些因素? (8%)
9. 「重體力勞動作業勞工保護措施標準」可用來保護勞工，請舉出三種重體力勞動作業? (6%) 請舉出兩種重體力勞動作業勞工保護措施 (4%)