

系所組別：環境醫學研究所甲組

考試科目：工業衛生

考試日期：0224，節次：2

※ 考生請注意：本試題不可使用計算機

1. Please define Industrial hygiene (5%), and present the primary responsibility of the industrial hygienist in general and to employers (10%).
2. What is the change in the intensity of the noise when the decibel decreases from 100 to 10 decibels? ( $dBA = 10 \cdot \log_{10}(I / I_0)$ ,  $I_0$  is  $10^{-12}(\text{Watt/m}^2)$ ) (20%)
3. What are the purposes of industrial ventilation? (10%) Please describe the main components of the local exhaust exhaust system in a figure. (10%)
4. Please define biomarker (5%) and present the requirements of ideal biomarker (10%).
5. What is ergonomics and what is some common occupational health problems related? (15%)
6. Pi accidentally opened one of the drawers in the ship and saw an opened half full bottle of pure n-heptane (VP: 40mmHg(at 22°C); MW:100.2; PEL:500ppm). He quickly closed the drawer because of the strong odor. What is the maximum concentration of brief exposure in ppm? Is the concentration over the PEL? (15%)