

本試題是否可以使用計算機: 可使用, 不可使用 (請命題老師勾選)

1. What are aliphatic hydrocarbons? What are their main health effects while being used as an organic solvent? (12%)
2. What is asbestos? An asbestos is know with $3 \mu\text{m}$ in length and $2 \mu\text{m}$ in diameter, Will it be harmful to human health? Why? (12%)
3. Please define nano-particles. What are the intrinsic properties of nano-particles that will affect their health effects to human beings? (12%)
4. Please describe occupational damage-risk criteria used for evaluating noise induced hearing losses. (12%)
5. The vapor pressure of mercury at 25°C is 0.0018 mmHg . The atomic weight of mercury is 200.6 g/mole . If the mercury vapor were allowed to reach equilibrium at this temperature in an enclosed space, what would be the mercury vapor concentrations in the space (in mg/m^3). (12%)
6. A tank ($L \times W = 2\text{m} \times 1\text{m}$) is known for a degreasing purpose, please design a canopy hood to control the release of trichloroethylene vapor from the tank. Please make any assumptions you want for an effective design. (12%)
7. Please define following terminologies(28%)
 - (1) Heat stress
 - (2) The vapor/hazard ratio number
 - (3) Extra-thoracic aerosols
 - (4) Octave band
 - (5) Static sampling
 - (6) Dew point
 - (7) Loudness