

※ 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. Explain the following terms and their toxicological significance: (15%)
 - a. Transversion mutation.
 - b. Free radical.
 - c. Tumor promotion.
 - d. Cytotoxicity.
 - e. Phase II reaction.
2. Describe as much as possible how a normal cell becoming transformed cancerous cell when exposed to hormone-like environmental chemicals. (10%)
3. How do our body's immune system react to the invading pathogens or particulate matters? Please specify a portal of entry in your answer. (25%)
4. Describe several dysfunctions of toxic heavy metals. (15%)
5. Please identify the chronic health effects of exposure to airborne particulate matters. (10%)
6. "Evidence is insufficient to prove the presence or absence of benefits from use of multivitamin and mineral supplements to prevent cancer and chronic disease (Annals of Internal Medicine, 2006)." To use or not to use multivitamin and mineral supplements for health promotion is a question. Give your advice to the general public. (25%)