

系所組別：環境工程學系乙組

考試科目：環境工程概論

考試日期：0307，節次：1

※ 考生請注意：本試題 可 不可 使用計算機

1. Please explain the following terms/abbreviations.

- (1) SVI
- (2) Compost
- (3) Atmospheric stability
- (4) Stoichiometric ratio
- (5) Flocculation

(每小題 4 分，共 20 分)

2. A water supply plant is always suffered from very high turbidity of raw water after typhoon. What are those technologies which could be applied to resolve this problem? (20 分)

3. A wastewater treatment plant (WWTP) is located inside an industrial complex which is designed to treat wastewater from various plants. The WWTP is suffered from the odor nuisances from several processes inside the plant.

(1) Please identify the potential sources of odor nuisance inside the WWTP.

(10 分)

(2) How to resolve this problem by improving the operation of WWTP?

(10 分)

4. The authority tries to develop an air monitoring system to survey the airborne VOCs species and concentrations in a city.

(1) What kind method/instrument could be applied? (10 分)

(2) Please discuss the principle of each method/instrument. (10 分)

5. A municipal incinerator of a city was constructed in 1990 with the base of 300 ton/day (HHV=2300 Kcal/kg). The forecast data of solid waste production is 200 ton/day (HHV=2000 Kcal/kg) in 2010.

(1) What will the technical issues happen to the plant? (10 分)

(2) What can you do to resolve these problems? (10 分)