

\*注意：第 I~V 部份請依題號順序於答案卷之「非選擇題作答區」內依序作答。\*

**I. Please choose ONE appropriate term from the following twenty six for each question (3% each question):**

1. Many persons are worry about if avian influenza will become a \_\_\_\_\_.
2. Tom tried to \_\_\_\_\_ caffeine from coffee beans using dichloromethane.
3. \_\_\_\_\_ are able to synthesize their own food substances.
4. Organic mercury is usually more toxic to the \_\_\_\_\_ system than inorganic mercury.
5. A prolonged process of bronchoconstriction in \_\_\_\_\_ attack can be life threatening.
6. \_\_\_\_\_ means a pollutant is released from a source.

- |                  |                |               |                  |
|------------------|----------------|---------------|------------------|
| (A) mammals      | (B) ferment    | (C) emulsion  | (D) agitate      |
| (E) respiratory  | (F) zoonosis   | (G) kidney    | (H) emission     |
| (I) saprophytes  | (J) gastric    | (K) arthritis | (L) concussion   |
| (M) asthma       | (N) perfusion  | (O) fungi     | (P) tuberculosis |
| (Q) nerve        | (R) evaporate  | (S) extract   | (T) heterotrophs |
| (U) encephalitis | (V) autotrophs | (W) cardiac   | (X) optical      |
| (Y) filter       | (Z) diffusion  |               |                  |

**II. Please choose ONE most appropriate answer for each question (4% each question):**

7. The rule of thumb is that water should contain an average of \_\_\_\_\_ residual chlorine to be potable. (A) 0 ug/ml (B) 0.2-0.6 ug/ml (C) 2-6 ug/ml (D) none of the above.
8. Colony count is the general method to quantify the environmental microbial amount in a specific group. What analytical technique(s) can be used for obtaining the colony count? (A) spread-plate (B) pour-plate (C) all of the above (D) none of the above.
9. When treated with a water sample with high turbidity, which of the following method(s) is(are) suitable before culturing and performing the colony counting? (A) Most probable number technique (B) membrane filter method (C) all of the above.
10. Which of the following waterborne diseases is thought to be the greatest risk to those traveling in remote wilderness areas of the United States today? (A) legionellosis (B) giardiasis (C) cholera (D) polio.

接背面

**III. Please choose ONE most appropriate answer for each question (3% each question):**

11. Which of the following method most often involves with mercury detectors? (A) IR (B) UV (C) change of color.
12. Which of the following method can monitor carbon monoxide most accurately in real time? (A) electrochemical sensors (B) activated charcoal tube (C) detector tubes.
13. A cascade impactor is used to separate: (A) solid compounds from liquid (B) particles by size (C) light intensity by frequencies
14. Which of the following law is used in spectroscopy analysis for quantification purpose? (A) Henry's law (B) Fick's law (C) Beer's law.
15. Which of the following condition describes the term of 'inversion' correctly when air pollution problems are discussed? (A) temperature increases as altitude increases (B) temperature decreases as altitude increases (C) temperature stays the same as altitude increases.

**IV. Please choose ONE most appropriate answer for each question (2% each question):**

16. A sound pressure level is determined to be 85 dB at 150 m, what would the sound pressure level be at a distance of 600 m? (A) 90 dB (B) 78 dB (C) 75 dB (D) 73 dB.
17. The ionization radiation protection variable that has a linear relationship to dose is: (A) Time (B) Distance (C) Shielding (D) All of the above.
18. A blank sample in environmental measurement refers to: (A) Samples which exceed holding times (B) Samples with constituent concentrations beneath regulatory thresholds (C) Samples which are divided prior to containerization for analysis by different laboratories (D) An artificial sample designed to monitor contaminants introduced during sampling and/or analysis.
19. Glassblower's cataracts are normally experienced by workers exposed to what form of radiation? (A) Alpha (B) UV (C) IR (D) Microwave.
20. Lakes which have nutrients, support life, and are more turbid are said to be: (A) Eutrophic (B) Oligotrophic (C) Dystrophic (D) Unpolluted.
21. All of the following except \_\_\_\_\_ are components of photochemical air pollution. (A) Ozone (B) Sulfur Dioxide (C) Hydrocarbons (D) Oxides of Nitrogen.
22. What is the compound in the atmosphere that is associated with the greenhouse effect? (A) Carbon monoxide (B) Methane (C) Ozone (D) Nitrogen.
23. Raynaud's Syndrome is caused by: (A) Repetitive motion stresses (B) Improper lifting (C) Improper posture (D) Hand-arm vibration.

24. Why can't TLV's be applied directly as air pollution standards? (A) TLV's do not exist for most regulated air pollutants (B) Air pollution standards are not as strict (C) Different substances are covered (D) Air pollution standards must consider community exposure among a wider range of sensitivity.
25. The following agents can contribute to indoor air pollution, with the exception of: (A) Carbon dioxide (B) Formaldehyde (C) Asbestos (D) PCB's.
26. Which of the following does not fall completely within the nonionizing radiation portion of the electromagnetic spectrum? (A) Microwaves (B) Ultraviolet (C) Infrared (D) Visible light.
27. \_\_\_\_\_ are a class of compounds that might be formed as a result of drinking water disinfection. (A) Aldehydes (B) Trihalomethanes (C) Haloacetic acids (D) All of the above.

***V. Please answer the following questions BRIEFLY:***

28. How do toxic substances enter the body? (6%)
29. Please discuss three consequences of the inappropriate disposal of refuse. (6%)
30. Please briefly describe the meaning of "cometabolism (共代謝)" which can be applied in the treatment of environmental contaminants. (4%)
31. Name the three major components of 'risk analysis': risk assessment; \_\_\_\_\_; (3%) and \_\_\_\_\_ . (3%)
32. From the aspects of Environmental Health, what belongs to "Vulnerable Groups"? (5%)

試題隨卷繳回