

※ 考生請注意：本試題不可使用計算機

1. The outbreak of “Norovirus” has caused some level of public concerns in this winter of 2012-2013. Please discuss briefly: (15%)
 - (a) Its basic nature.
 - (b) What’s the typical incubation period?
 - (c) What are the main symptoms?
 - (d) What’s the environmental reservoir and how does it disseminate?
 - (e) How will be the best practice from an environmental health standpoint?

2. The effect of rapid climate change has attracted global attention for many reasons. Please identified the most critical challenges to Taiwan in the following 2 sectors (1 example for each), and briefly offer your rationales to support your choices. (10%)
 - (a) Environment
 - (b) Public health

3. Please select 1 air pollutant that has both indoor quality standard and outdoor air quality standard in Taiwan. Discuss briefly if there is any difference in their respective levels. If so, do you agree and why? If not, do you agree and why? (5%)

4. From the figure 1 below, please describe the deposition regions in human lungs for “ultrafine particles”, “fine particles” and “coarse particles”, respectively. (9%) What is the range of the particle size that is hardest to capture according to the figure? (6%)

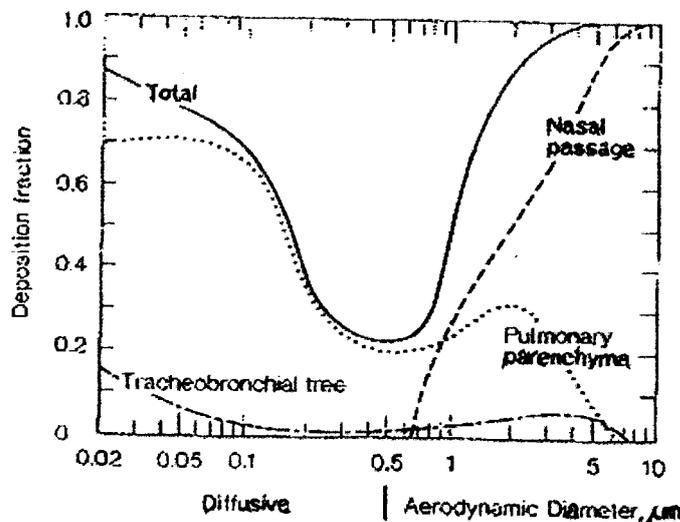


Figure 1: Size-dependent deposition probabilities of particle in different compartments of the human lung (ICRP 1975)

背面仍有題目,請繼續作答)

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5. Please explain the reasons for temperature inversion and draw a figure of the temperature profile (x-axis: temperature, y-axis: altitude). (9%) What are the related health impacts (6%)?
6. Please give five diseases and its causative agents which transmitted through contaminated drinking water (10%), and then give three methods to disinfect the contaminated drinking water (9%).
7. Please explain why the “Coliform group” is the good biological indicator for drinking water? (6%) The determined data of total Coliform group in one water sample with multiple tube fermentation method were listed as follows and use those data to calculate the MPN of this water sample and identify whether the MPN meet the water quality standard or not? (5%)

	No. of positive tubes	No. of negative tubes
0.1 mL	0	5
1.0 mL	2	3
10.0 mL	4	1

8. Please explain the meaning of five activities in the process of environment impact assessment. (10%)