高雄醫學大學 106 學年度 研究所碩士班 招生考試 **系所：公共衛生學系碩士班**
科目： 流行病學

請務必於試卷紙上作答，違者該科不於計分。

1.名詞解釋(每題 4 分):
a. 生態謬誤
b. 危險對比值
c. 霍桑效應
d. 負向干擾因子
e. 分率

2.請定義終身盛行率(Life time prevalence)與累積發生率(cumulative incidence)?請列出公式?並說明這兩個指標的差異處?以及其使用時機?(20 分)

3.何謂同期病例對照研究(concurrent case control study)以及重疊病例對照研究(nested case control study)?說明這兩種研究設計的優缺點各為何? (20 分)

4. 為了解一中藥輔助療法對於三期以上乳癌病人復發之改善效果，研究人員預期進行一臨床試驗將 380 位病人隨機分派為兩組，共有 35 人失去追蹤，本研究採用 Intention to treat analysis，一組使用荷爾蒙治療法復發率為 28%，另一組使用荷爾蒙治療法加上中藥輔助療法復發率為 13%，請問: (20 分)
(1)採用隨機分派的原因為何?
(2)什麼是 Intention to treat analysis?對結果有何影響?
(3)請問中藥輔助療法可降低多少三期以上乳癌病人復發危險性(reduction in relative risk, RRR)?
(4)請問每多少位三期以上乳癌病人使用中藥輔助療法，可以減少一人復發的產生(Number needed to treat, NNT)?
(5)此結果是否可以推論至全部乳癌病人?為什麼?

5.過去台灣曾發生過許多重大環境與職業危害事件，如美國無線公司(RCA)在龍潭污染事件、台南多氯聯苯中毒事件、或輻射鋼筋建屋所謂輻射屋….等等，國內流行病學家曾利用**歷史性追蹤研究(historical cohort study)**來進行這些事件的暴露對民眾健康影響的調查，你覺的原因為何呢?也請你以上述一例或者舉其他事件亦可，請利用歷史性追蹤研究設計法來說明你的研究步驟? (20 分)

命題結束，以下空白。

高雄醫學大學 106 學年度 研究所碩士班 招生考試

系所：公共衛生學系碩士班-環境衛生學組
科目： 環境暨職業衛生學

請務必於試卷紙上作答，違者該科不於計分。

I. Please choose ONE most appropriate answer for each question (27%)

1. The followings are notable examples of nondegradable waste except (a) wastes from petroleum refining (b) DDT (c) phenol (d) the salts of heavy metals
2. ____ 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.
3. Which one of the followings cannot cause eutrophication? (a) detergents (b) fertilizers (c) antibiotics (d) animal waste
4. Minimizing the production of hazardous waste NOT included (a) solidification (b)segregating waste (c)eliminating raw materials (d) changing manufacturing process
5. Which of the following statement is not true? (a) CERCLA stands for Comprehensive Environmental Response, Compensation, and Liability Act (b) NPL stands for National Priorities List (c)RCRA stands for Resource Conservation and Recovery Act (d) USNRC stands for United States Nuclear Regulatory Committee
6. The following agents can contribute to indoor air pollution, with the exception of (1)Carbon Dioxide (2)Formaldehyde (3)Asbestos (4)PCB's
7. All of the following except ___are components of photochemical air pollution (1) Ozone (2)Sulfur dioxide (3)Hydrocarbons (4)Oxides of Nitrogen
8. The three barriers between inner and outer environment except (1)skin (2)GI tract (3)Liver (4)Lung
9. _____ is not the category of carcinogenesis (1)bioactivation (2)initiation (3)promotion (4)progression

II. Please match the biological effect to the specific nonionizing radiation (12 %)

1. ( )UV	a. Erythema
2. ( )Static magnetic field	b. Irritating sparks
3. ( )IR	c. Lose tract of day-night cycles
4. ( )Radiofrequency and microwave radiation	d. possible promoter of tumor growth
5. ( ) Steady electric field	e. Retinal burns
6. ( )time-varying subradiofrequency field	f. Temporary male sterility

III. (1) What is the sound pressure level (dB) when the sound pressure is 40μpa? (6%)
(2) An employ is exposed to the following noise level during the workday:
85 dB for 3 hr; 90 dB for 2hr; 95 dB for 2.5 hr; 110 dB for 0.5 hr;
Dose this noise exposure exceed the regulation? (6%)
(3) How to control noise? (15%)

OSHA Permissible Noise Exposure

Duration per day (hours)	Sound level (dB)
8	90
6	92
4	95
3	97
0.5	110

IV.What are particle deposition mechanisms? (10%)

V.Please write down four kinds of disinfectants applied in drinking water and its advantages and disadvantages (24%)