



Specimen Paper A
DFPH Sample Questions - Paper IA

Section A: Research Methods

Question 1:

A local study has compared the prevalence of dementia and ambient NO₂ concentrations. The data on dementia and NO₂ concentrations was obtained from two separate data sources, each aggregated at small area level (each containing approx. 1,500 people). The investigators found a positive relationship between NO₂ concentrations and the prevalence of dementia.

(a) Using the example above:

- i. What type of study design was used in this investigation and what are its characteristic features? (1 mark)
- ii. Discuss the strengths of this type of study design. (2 marks)
- iii. Discuss the weaknesses of this type of study design. (2 marks)

(b) With reference to the example, give plausible explanations for the observed relationship. (5 marks)

(Total 10 marks)

Question 2:

Researchers examined the contribution of risk factors to excess mortality in isolated and lonely individuals using data from the UK Biobank cohort study. The main outcome was all-cause mortality. Almost half a million men and women were included in the analyses, with a mean follow-up of 6.5 years (SD 0.8). The hazard ratio for all-cause mortality for social isolation compared with no social isolation was 1.73 (95% CI 1.65–1.82) after adjustment for age, sex, ethnic origin, and chronic disease and was 1.26 (95% CI 1.20–1.33) after further adjustment for socioeconomic factors, health related behaviours, depressive symptoms, biological factors, cognitive performance, and self-rated health.

- (a) Why did the researchers adjust for factors such as age and sex? (3 marks)
- (b) Interpret the hazard ratios for all-cause mortality for social isolation compared with no social isolation. (5 marks)
- (c) Suggest why the measurement of loneliness is problematic and how it should be measured. (2 marks)

(Total 10 marks)

B: Disease causation and the diagnostic process in relation to public health; prevention and health promotion

Question 3:

You are asked to provide public health advice to inform the development of a healthy ageing strategy for your local population.

- (a) Discuss, with examples, the benefits of a healthy lifestyle in older age (over 75 years). (5 marks)
- (b) What are the wider determinants of good health and wellbeing in older age (over 75 years)? (5 marks)

(Total 10 marks)

Question 4:

Members of a local environmental pressure group are seeking your support, as a public health specialist, to prevent the siting of a waste incinerator near to their village on the grounds of the perceived risk to their children's health.

- (a) What potential public health effects of the construction and operation of such a facility might give rise to public concern? (3 marks)
- (b) List two potential health benefits that might arise from such a development. (1 mark)
- (c) Outline the steps that you would take when deciding how to respond to this group? (6 marks)

(Total 10 marks)

C: Health information

Question 5:

You have been asked to prepare a report on children's health needs, to include a selection of key indicators of local needs, for the Director of Public Health's annual report for a local district of population 200,000.

- (a) Describe 4 characteristics that should be considered when selecting indicators of population health needs. (4 marks)
- (b) Discuss 3 different types of key indicator of children's health for inclusion in your report, giving strengths and weaknesses for each. (6 marks)

(Total 10 marks)

Question 6:

In recent years the use of digital health technologies by individuals and health services has increased rapidly.

- (a) List three digital technologies and describe how they may be used in health promotion. (3 marks)
- (b) Discuss three advantages of using digital technology for health promotion. (3 marks)
- (c) Discuss four challenges associated with the use of digital technology for health promotion. (4 marks)

(Total 10 marks)

Specimen Paper A
DFPH Sample Questions - Paper IB

D: Medical Sociology, Social Policy and Health Economics

Question 7:

Using a public health or health service intervention as an example to illustrate your answers define and describe each of the following health economic concepts:

- (a) Discounting (3 marks)
- (b) Supply and demand (3 marks)
- (c) Efficiency, including description of different forms of efficiency (4 marks)

(Total 10 marks)

Question 8:

Public health specialists have a crucial role to play in the prioritisation of healthcare interventions. You are a public health specialist working in a healthcare system where there is a fixed budget. The budget allocated to cancer treatments is not sufficient to fund all the drugs that are licensed to treat cancer. Consequently, some cancer drugs are funded routinely, and some are not.

You have been asked to advise how the economic benefit from each cancer drug can be compared.

- (a) Define the term 'quality adjusted life year' and describe how this is calculated. (3 marks)
- (b) Using drugs to treat cancer as an example, describe how the economic concept of quality adjusted life years can be used to decide which drugs should be funded and which should not, identifying advantages and disadvantages of this approach in this context (7 marks)

(Total 10 marks)

E: Organisation and Management of Health Care, and Health Care Programmes

Question 9:

For each of the following, give a brief description of what it is, why it is relevant to public health, its strengths and limitations, and an example of its use in a public health setting:

- (a) Weighted capitation (5 marks)
- (b) Programme budgeting (5 marks)

(Total 10 marks)

Question 10:

Conflict within organisations can take several forms.

- (a) Name four forms of conflict that might arise within a healthcare organisation and, for each, describe the circumstances in which it might arise (4 marks)
- (b) Name three potential effects of conflict on a healthcare team and, for each, briefly describe how this could impact quality of care (3 marks)
- (c) Describe two approaches to resolving conflict in health or social care teams. For each approach, identify one strength and one weakness (3 marks)

(Total 10 marks)

END OF PAPER