

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MSc (COMMUNITY MEDICINE/COMMUNITY DENTISTRY)
EXAMINATION (NEW SYLLABUS)
NOVEMBER 2014

Date : 17th November 2014

Time : 9.00 a.m.- 12.00 noon.

PAPER I

Community Medicine candidates should answer all six questions in parts A and B.

Community Dentistry candidates should answer all six questions in Parts A and C.

Each question to be answered in a separate book.

PART A

1. A hospital based case control study was conducted to determine serum adiponectin as a predictor of Non-Hodgkin's Lymphoma among 1 – 12 year old children. The results are given below.

	Cases	Controls
Adiponectin (g/dl)		
Mean	17.2	11.7
Standard deviation	5.36	5.45

Maternal smoking

	Number (percentages)	
Yes	55 (45.5)	46 (38)
No	66 (54.5)	75 (62)

- 1.1. Define cases and controls for this study ? (10 marks)
- 1.2. List two (02) measures to minimize bias in determining serum adiponectin levels. (20 marks)

- 1.3. Name the statistical test to determine the association between lymphoma and following variables.
 - 1.3.1. Serum adiponectin levels (10 marks)
 - 1.3.2. Maternal smoking (10 marks)

- 1.4. If this was a matched design, name the statistical test to determine the association between lymphoma and following variables.
 - 1.4.1. Serum adiponectin levels (10 marks)
 - 1.4.2. Maternal smoking (10 marks)

- 1.5. Explain why and how you would get informed consent for the study? (20 marks)

- 1.6. Name a statistical method to control for potential confounding factors. (10 marks)

2. A phase III double blind randomized placebo controlled trial was conducted to evaluate the efficacy of a new ophthalmic solution to reduce infection following cataract surgery. Intention to treat analysis was performed. The infection rate was significantly lower ($P < 0.01$) in the intervention group compared to the placebo group on day 15.
 - 2.1. State the objective of the above study. (10 marks)
 - 2.2. Explain the purpose of randomization. (10 marks)
 - 2.3. Explain the procedure of randomization. (10 marks)
 - 2.4. Explain the importance of allocation concealment. (30 marks)
 - 2.5. Discuss the importance of 'intention to treat analysis'. (20 marks)
 - 2.6. Name two (02) statistical tests that could be applied for evaluating the efficacy of the intervention. (20 marks)

- 3.
- 3.1. Describe the measures that you can adopt as the Medical Officer of Health (MOH) to increase access to health services for young persons in your MOH area. (40 marks)
 - 3.2. "Fresh still birth rate is a good indicator for quality of intra-natal care"
Discuss the above statement. (20 marks)
 - 3.3. Reduction of Maternal Mortality Ratio by 75% in 2030 from that of 2010 is one of the targets of the Post Millennium Development Goals Agenda. Outline the strategies that should be adopted by Sri Lanka to achieve this. (40 marks)

PART B

4. The incidence of hip fractures in old age is reported to be increasing in Sri Lanka. The commonest reason for hip fracture in old age is falls.
- 4.1. List the risk factors for falls in old age. (30 marks)
 - 4.2. As a Medical Officer of Health (you are invited by the village elders' committee for a discussion on implementing a programme to prevent falls in the community.

Describe how you would contribute to the programme. (70 marks)
- 5.
- 5.1. Classify the methods available to determine the nutritional status of a population. (15 marks)
 - 5.2. List three (03) different methods available to assess dietary intake of an individual. (15 marks)
 - 5.3. Discuss two (02) of the methods you have listed in 5.2. (70 marks)

- 6.
- 6.1. As a Medical Officer of Health you intend to inspect a large scale ready-to-eat food manufacturing establishment in your area. Describe the aspects you would consider in assessing food safety and hygiene of this establishment. (50 marks)
- 6.2. Heavy vehicles are increasingly being used for transportation of goods. Discuss how occupational hazards faced by heavy vehicle drivers can be prevented. (50 marks)

PART C

- 7.
- 7.1. Describe the range of information needed to plan dental services for a district. (50 marks)
- 7.2. Explain the steps involved in planning the above activity. (50 marks)
- 8.
- 8.1. Define screening. (10 marks)
- 8.2. Outline the criteria for screening for a disease. (30 marks)
- 8.3. Explain how screening for oral cancer/oral potentially malignant disorders comply with the criteria mentioned in 8.2. (60 marks)
- 9.
- 9.1. Describe the global trends in dental caries. (40 marks)
- 9.2. Outline the factors responsible for these trends. (20 marks)
- 9.3. Discuss the impact of changing demographic pattern on oral healthcare delivery. (40 marks)

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PAPER II

Answer all five (06) questions.

Each question to be answered in a separate book.

1. According to the latest census of 2012 in Sri Lanka, the proportion of population 5 years and above who had disabilities was 8.6% which amounted to 1.6 million people. The commonly reported disabilities were impairment of vision, hearing, mobility and activities of daily living.
 - 1.1. Briefly describe the contributing factors for this high rate of disabilities. (30 marks)
 - 1.2. Describe the services available in Sri Lanka for persons with these disabilities. (70 marks)

2. As a Medical Officer of Health (MOH) you observe that the prevalence of drug abuse among youth is relatively high in your area.
 - 2.1. Define health promotion.
 - 2.2. Describe briefly a theoretical framework which you could adopt in planning a health promotion intervention for this problem. (50 marks)
 - 2.3. Discuss the possible challenges in carrying out the above programme. (15 marks)
 - 2.4. As the MOH describe briefly how you would deal with these challenges. (15 marks)

3. Describe using the results framework the development of indicators for programme monitoring and evaluation. (100 marks)

4.
 - 4.1. Define the following terms giving examples relevant to Sri Lanka
 - 4.1.1. Control of communicable diseases (10 marks)
 - 4.1.2. Elimination of communicable diseases (10 marks)
 - 4.1.3. Eradication of communicable diseases (10 marks)

 - 4.2. Describe the measures currently taken to prevent possible importation and transmission of poliovirus within the country. (70 marks)

5. As a Regional Epidemiologist of a given district you are asked to evaluate disease surveillance activities of a teaching hospital.
 - 5.1. List the data/information sources available at a teaching hospital that can be used to assess disease surveillance activities. (25 marks)

 - 5.2. Describe in detail how you would evaluate disease surveillance activities of this teaching hospital using the above data/information sources. (75 marks)

6.
 - 6.1. Briefly describe what is meant by the following :
 - 6.1.1. Out of pocket expenditure in health. (15 marks)
 - 6.1.2. Private health expenditure. (15marks)
 - 6.1.3. Total health expenditure. (15 marks)
 - 6.1.4. National health accounts. (15 marks)

 - 6.2. Describe two (02) policy interventions that may be adopted to reduce catastrophic out of pocket expenditure. (40 marks)