

POSTGRADUATE INSTITUTE OF MEDICINE  
UNIVERSITY OF COLOMBO

Marks  
The X

MSC (COMMUNITY MEDICINE/COMMUNITY DENTISTRY)  
EXAMINATION (OLD SYLLABUS) – NOVEMBER 2015

Date:- 26<sup>th</sup> November 2015

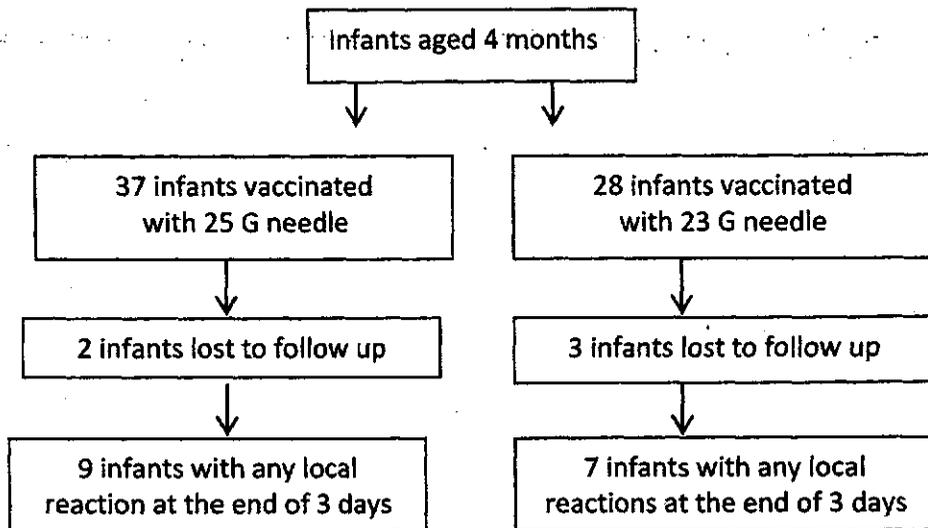
Time:- 9.00 a.m. – 12.00 noon

PAPER I

Answer all five (05) questions.

Each question to be answered in a separate book.

1. Given below is the study design followed to compare the rates of local reactions associated with two needle sizes (25 G and 23 G) used to administer routine immunization to infants aged 4 months.



- 1.1 State the eligibility criteria for the study population of the above study. (15 marks)
- 1.2 Giving reasons indicate the best method that should be used to select the two groups. (15 marks)
- 1.3 Discuss the precautions that should be taken during outcome assessment to minimize bias in this study. (30 marks)
- 1.4 Interpret the results based on hypothesis testing. (40 marks)

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2. The last population census of Sri Lanka was held in 2012.
- 2.1 State the two (2) types of census enumeration. (10 marks)
- 2.2 List the steps that were followed in the pre-census period to ensure full coverage. (20 marks)
- 2.3 State the measures that can be taken by Sri Lanka to utilize the demographic bonus effectively. (30 marks)
- 2.4 'Census data on the elderly population is essential for health planners.'  
Comment on this statement. (40 marks)
3. A researcher is planning to conduct a cohort study to determine the risk of sedentary life style on the incidence of type 2 diabetes.
- 3.1 Explain three (3) ways that could introduce classification bias in this study. (15 marks)
- 3.2 State three (3) methods in which the effect of confounding can be controlled, giving one example for each method. (15 marks)
- 3.3 Comment on the implications of 'loss-to-follow-up' in this study. (15 marks)
- 3.4 List the ethical issues related to this study. (20 marks)
- 3.5 Explain how the findings of the above study could be analyzed and interpreted. (35 marks)
- 4.
- 4.1 Describe common ergonomic problems seen in garment factories. (30 marks)
- 4.2 List the interventions you propose to address the problems mentioned in 4.1. (20 marks)
- 4.3 'Workplace ergonomic interventions are cost effective.' Discuss this statement. (50 marks)

5.1 In a study conducted among diabetics, the mean HbA1C level was 7.0 (n=100, SD=1.2) in males and 8.3 (n=100, SD=1.7) in females.

5.1.1 Calculate the 95% confidence intervals for the HbA1C levels for males and females. (30 marks)

5.1.2 Interpret the results based on the confidence intervals. (20 marks)

5.2 An area in an MOH division in the Central Province has been affected by frequent landslides due to prevailing heavy rains. Approximately 1000 persons have been moved to a nearby school for safety reasons. These people are likely to remain in this safe location for the next 3 weeks.

5.2.1 Describe the immediate requirements that should be provided within the first 24 hours of displacement. (30 marks)

5.2.2 List the partners with whom the health team should work together to provide the required services. (20 marks)

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MSc (COMMUNITY MEDICINE/COMMUNITY DENTISTRY)  
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Date:- 26<sup>th</sup> November 2015

Time:- 1.00 p.m. – 4.00 p.m.

PAPER II

Answer all five (05) questions.

Each question to be answered in a separate book.

1.

1.1 Disability is an emerging public health problem in Sri Lanka.

Explain giving reasons the above statement.

(40 marks)

1.2 As a Medical Officer of Health, you have been asked to design a community based programme to improve the wellbeing of persons with disabilities in your area.

1.2.1 List five (5) key stakeholders that could be involved in the above programme.

(10 marks)

1.2.2 Describe five (5) main activities that should be included in the above programme.

(30 marks)

1.2.3 Describe the factors related to care-giver burden.

(20 marks)

2.

2.1 State the three (3) changes incorporated in to the National Immunization Schedule during 2015.

(15 marks)

2.2 Describe the rationale for each of these changes.

(30 marks)

2.3 A Medical Officer of Health (MOH) has identified 15 vaccination site abscesses during a 2-month period in the Adverse Events Following Immunization (AEFI) Register maintained at the MOH office.

2.3.1 Describe how the MOH should investigate this event.

(40 marks)

2.3.2 Describe the importance of AEFI surveillance.

(15 marks)

Contd.../2-

3.

3.1 As a district level Medical Officer, Non Communicable Diseases (MO/NCD) you have planned to conduct a programme to promote healthy diet among school children in your district.

3.1.1 List five (5) key stakeholders who could be involved in the above programme. (10 marks)

3.1.2 Discuss the strengths and challenges in the multisectoral approach in conducting programmes to promote healthy diet among school children at the district level. (30 marks)

3.2

3.2.1 List the services available in Healthy Life Style Centres established by the Ministry of Health. (15 marks)

3.2.2 Discuss the strategies that could be adopted to increase participation at Healthy Life Style Centres. (35 marks)

3.2.3 List the personnel who could support the activities of the Healthy Life Style Centres. (10 marks)

4. Write notes on the following:

4.1 Family planning counselling. (25 marks)

4.2 Maternal death investigation. (25 marks)

4.3 Supportive supervision. (25 marks)

4.4 Mental health services in Sri Lanka. (25 marks)

5.

5.1 Explain how community participation could be strengthened to improve Maternal and Child Health clinic facilities and services. (40 marks)

5.2 List five (5) possible challenges in strengthening community participation. (20 marks)

5.3 How could the Medical Officer of Health overcome these challenges. (20 marks)

5.4 Describe the importance of intersectoral coordination in improving community health. (20 marks)

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**Date:- 27<sup>th</sup> November 2015**

**Time:-9.00 a.m. – 12.00 noon**

**PAPER III**

Community Medicine candidate should answer **all five (05) questions in Parts A and B**  
Community Dentistry candidates should answer **all five (05) questions in Parts A and C**  
Each question to be answered in a separate book.

**PART A**

1. Gender-based violence which has been identified as a public health issue by the World Health Organization is prevalent in Sri Lanka.
  - 1.1 Describe the difference between sex and gender. (10 marks)
  - 1.2 Define gender-based violence. (05 marks)
  - 1.3 List the main causes of gender-based violence. (15 marks)
  - 1.4 List the contributory factors for gender-based violence. (10 marks)
  - 1.5 Design a programme for prevention and response to gender-based violence at Medical Officer of Health (MOH) area level. (40 marks)
  - 1.6 Outline the roles and responsibilities of each category of health care workers of the MOH team in implementing the above programme. (20 marks)

2. The Family Health Bureau is responsible for the National Perinatal Mortality Surveillance (NPMS) in Sri Lanka.

2.1 What is a perinatal death? (10 marks)

2.2 The NPMS for the year 2014 reported the following;

Foetal deaths (>28 weeks of gestation)	- 1386
Neonatal deaths	- 2667
Early (<7 days) neonatal deaths	- 1623
Total live births	- 348,362
Total deliveries	- 351,451

Calculate the perinatal mortality rate. (35 marks)

2.3 Describe the importance of perinatal mortality surveillance for Sri Lanka. (30 marks)

2.4 The cut-off for stillbirths at present is 28 weeks of gestation in Sri Lanka.

Discuss the advantages and disadvantages of lowering the cut-off to 20 weeks of gestation. (25 marks)

3.

3.1 Implementation of the 'package for newly married couples' improves health and well-being of the family.

Discuss the above statement. (30 marks)

3.2 Although the Neonatal Mortality Rate in Sri Lanka has declined over the past five decades, the proportion of neonatal deaths out of all infant deaths has increased.

Discuss the implications of this phenomenon for future program planning. (35 marks)

3.3 Every year nearly 600 children die and 270,000 are admitted to hospitals due to injury-related causes in Sri Lanka.

As the Medical Officer of Health, outline a child injury prevention program for your area. (35marks)

### **PART B**

4. As breast and cervical cancers are the most prevalent cancers among women, they are screened for both in the Well Woman Clinics.

4.1 What is the target age for this purpose and describe the rationale for selecting that particular age. (15 marks)

4.2 Giving reasons indicate the anticipated optimum coverage of the above age. (15 marks)

4.3 Discuss the challenges in achieving the above coverage at the Medical Officer of Health area level. (30 marks)

4.4 Describe the measures to overcome the challenges mentioned in 4.3. (40 marks)

5.

5.1 Analysis of hospital infant mortality data for the year 2012 reported by the Medical Statistics Unit of the Ministry of Health indicates that 18% of deaths are due to birth defects. According to field data received by the Family Health Bureau, birth defect related infant deaths is 42%.

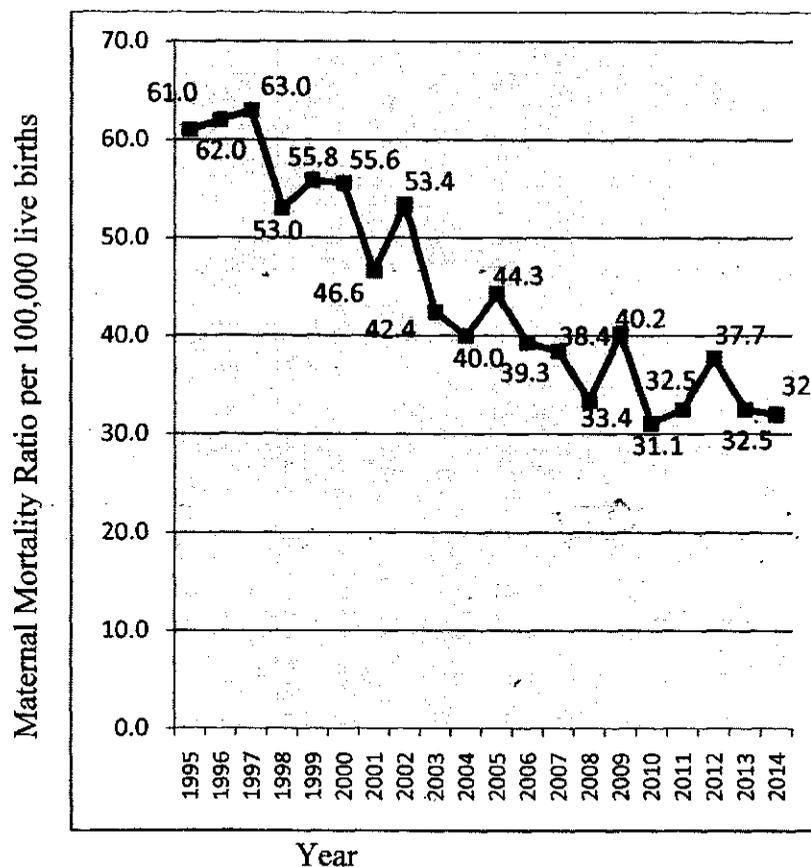
Discuss the reasons for this discrepancy. (30 marks)

5.2 'School health promotion programme is one of the important intervention packages to address non-communicable disease burden in Sri Lanka'.

5.2.1 Explain the rationale for the above statement. (10 marks)

5.2.2 Describe the health promotional interventions that can be implemented in schools to improve the psycho-social wellbeing of children. (25 marks)

5.3 Given below is the national maternal mortality ratio for Sri Lanka, 1995 - 2014.



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5.3.1 Describe the trends and the possible reasons for the trends. (15 marks)

5.3.2 Discuss 'Community representation in current maternal death review process in Sri Lanka. (20 marks)

### **PART C**

6. Critically discuss the appropriateness of the indices used in the following situations.

6.1 A school based survey to determine the prevalence of malocclusion in 12- year- old children using the Index for Orthodontic Treatment Need (IOTN). (50 marks)

6.2 A community based intervention to measure the improvement of periodontal health in pregnant mothers using the Community Periodontal Index (CPI). (50 marks)

7.

7.1 List the methods used to estimate dental manpower. (20 marks)

7.2 Discuss the advantages and disadvantages of the methods mentioned in 7.1. (80 marks)

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**PAPER IV**

Community Medicine candidates should answer **all five (05) questions in Parts A and B**

Community Dentistry candidates should answer **all five (05) questions in Parts A and C**

Each question to be answered in a separate book.

**PART A**

1. You are one of the technical members in the office of Regional Director of Health Services (RDHS).

1.1. Describe the importance of health promoting office settings. (30 marks)

1.2. Describe how you will transform the RDHS office into a health promoting office setting. (70 marks)

2.

2.1. Describe the role of the Medical Officer of Health (MOH) in the successful implementation of Adverse Events Following Immunization (AEFI) surveillance. (50 marks)

2.2. Discuss the importance of having a national surveillance system for Adverse Events Following Immunization (AEFI). (50 marks)

3.

3.1. Describe different types of outbreaks with examples. (30 marks)

3.2. MOH area "X" has reported an increased number of suspected cases of viral hepatitis A during the last two (2) weeks. As the MOH of the given area describe how you would carry out an epidemiological investigation (outbreak investigation) of this event. (70 marks)

Contd.../2-

## PART B

4. The estimated incidence of tuberculosis in Sri Lanka in 2014 was 65 per 100,000 population whereas the reported incidence in 2014 was 44.1 per 100,000 population.
- 4.1. List the possible reasons for this difference. (20 marks)
- 4.2. Describe four strategies that could bridge this gap. (40 marks)
- 4.3. Describe the role of the primary health care team in the control and prevention of tuberculosis in Sri Lanka. (40 marks)
5. Having eliminated indigenous malaria since November 2012, Sri Lanka is now in the phase of prevention of reintroduction. With Anopheline vectors in abundance throughout the year and frequent recording of 'imported malaria', sustaining malaria free status has become a persistent challenge.
- 5.1. Briefly describe the challenges against sustaining malaria free status in Sri Lanka. (30 marks)
- 5.2. List the strategies for the prevention of reintroduction of malaria in Sri Lanka. (20 marks)
- 5.3. Develop a plan of action for the year 2016 for strengthening malaria case surveillance in Sri Lanka for the prevention of reintroduction phase. (50 marks)

## PART C

- 6.
- 6.1. What is meant by demographic transition? (10 marks)
- 6.2. List the changes in the population structure of Sri Lanka over the past 20 years. (20 marks)
- 6.3. Briefly discuss the importance of the changes mentioned in 6.2 in planning oral health services in Sri Lanka. (70 marks)
7. As a Regional Dental Surgeon you are interested in determining the effectiveness of the services provided by a school dental clinic in a rural area. Describe the steps involved in this process. (100 marks)