

UNIVERSITY OF RUHUNA
FACULTY OF MEDICINE



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THIRD EXAMINATION FOR MEDICAL DEGREES PART II, SEPTEMBER 2015
COMMUNITY MEDICINE PAPER I

Answer **ALL FIVE** questions.
Answer each part in a **SEPARATE** book.

Time: 09.00 am – 12.00 noon
Duration: 3 hours

PART A

3
15
35

Epid

1.

1.1 At a school medical inspection, MOH routinely tests all new children aged 6-14 years for strabismus, using corneal light reflex test. The prevalence of strabismus in this age group is approximately 5%. The MOH's examination has a sensitivity of 80% and specificity of 90%. MOH refers those who are "test positive" to the ophthalmologist for further management.

1.1.1 If MOH examines 2000 children, how many children will be referred to the Ophthalmologist. (25 marks)

1.1.2 Calculate how many children with a positive corneal light reflex test had Strabismus truly. (25 marks)

1.2 In a prospective cohort study of coffee drinking and coronary heart disease (CHD), five (5) cups of coffee or greater was associated with a relative risk of 1.5 (95% CI = 1.2 - 1.8). When data were stratified by smoking status, the following results were obtained.

Smokers
RR = 1.7 (95% CI = 1.4 - 2.0)

Non - Smoking
RR = 0.8 (95% CI = 0.6 - 1.2)

1.2.1 Explain the above findings. (20 marks)

1.2.2 Explain the different ways to overcome the errors you have identified. (30 marks)

PART B

Stat

2.

2.1 List 2 examples to illustrate each of the following terms. (40 marks)

- 2.1.1 Nominal scale variable
- 2.1.2 Normally distributed variable
- 2.1.3 Non-probability sampling method
- 2.1.4 Descriptive statistics
- 2.1.5 Health indicator

2.2 A research has been conducted to find out whether there is a gender difference of malnutrition in children. A representative sample of 400 children (200 boys and 200 girls) was surveyed. It was found that 50 boys and 80 girls were malnourished.

2.2.1 Write the null hypothesis (10 marks)

2.2.2 Prepare a 2 x 2 contingency table. (10 marks)

2.2.3 Test the null hypothesis at 5% level using chi-square test (40 marks)

(Chi square table value for 1 degrees of freedom at 5% level is 2.57)

PART C

Occupation
3.

3.1 Dr. Fernando has been practicing as a full time general practitioner at Akuressa for last 10 years.
Most of the tea factory workers in Akuressa area consult Dr. Fernando for minor ailments.
Discuss Dr. Fernando's role in occupational health. (50 marks)

Demography
3.2

3.2 imagine that you have been appointed as the MOH in an MOH area in Mulative District immediately after the war of 30 years. As there are no previous records available, you want to do a demographic health survey before starting your work as the MOH.
3.2.1 List the demographic and health information that you would like to know in your area. (20 marks)
3.2.2 Briefly describe how the 30 years of war could have changed the demographic profile of the area. (30 marks)

PART D

Nutrition
4.

4.1 Outline the dietary advice you would give to
4.1.1 a woman planning to become pregnant. (50 marks)
4.1.2 a cancer patient on chemotherapy. (50 marks)

PART E

Environment
5.

5.1 Briefly describe the following.
5.1.1 Sick Building Syndrome (25 marks)
5.1.2 Carbon foot print (25 marks)

MCH
5.2

5.2 You are the MOH in a Health Unit Area and you got to know that there is an increase of teenage pregnancies in your Health Unit Area.
Briefly describe how you are going to address this problem in your area. (50 marks)

$(a+b+c+d)$
 $a+b+c+d$

~~a b~~
~~c d~~

$\frac{I_e + I_o}{P_{10}}$

P₁₀