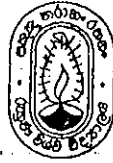


UNIVERSITY OF RUHUNA
FACULTY OF MEDICINE



THIRD EXAMINATION FOR MEDICAL DEGREES PART II, 03rd DECEMBER 2007
COMMUNITY MEDICINE PAPER I

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

Time: 09.00am – 12noon
Duration: Three Hours

Part A

- 1.
- 1.1 1.1.1 Define Life Expectancy (LE) and describe how LE at birth differs from LE at age one year and reasons for such differences. (25 marks)
- 1.1.2 Write notes on "Dependency Ratio". (25 marks)
- 1.2 "Agricultural workers in Sri Lanka are susceptible to occupational hazards"
Comment on the above statement. (50 marks)

Part B

- 2.
- 2.1 2.1.1 Discuss the importance of nutrition intervention in school children. (30 marks)
- 2.1.2 What are the factors influencing vitamin A deficiency in adults. (20 marks)
- 2.2 "The air quality in developing countries has deteriorated over the past few decades."
- 2.2.1 List the reasons for deterioration in air quality in developing countries. (15 marks)
- 2.2.2 Briefly describe the adverse health effects of air pollution. (35 marks)

Part C

- 3.
- 3.1 3.1.1 Describe the implementation of Well Women Clinic Programme in Sri Lanka. (30 marks)
- 3.1.2 List the strengths and limitations of the programme. (20 marks)
- 3.2 3.2.1 What are the functions of the Central Epidemiological Unit of Sri Lanka. (20 marks)
- 3.2.2 Several patients with fever and vesicular rash were admitted to many hospitals in the Galle district during past two weeks.
Describe what you would do in such a situation, if you are the Regional Epidemiologist of the area. (30 marks)

Part D

- 4. 4.1 List five measures of dispersion and describe them briefly. (20 marks)
- 4.2 Describe giving examples. (5 marks)
 - 4.2.1 a continuous variable (5 marks)
 - 4.2.2 a binary variable (5 marks)
 - 4.2.3 sampling methods (20 marks)
- 4.3 A study was conducted in Galle to identify the association, if any, between maternal rubella and congenital cataract. A sample of 30 children with the defect, and a sample of 35 children of similar background and age who did not have the defect were selected. Fifteen mothers having children with the defect and 10 mothers having children without the defect had rubella while carrying the child.
 - 4.3.1 Write the null and the alternative hypothesis to test for the association. (10 marks)
 - 4.3.2 Test the null hypothesis at the probability level of 0.05. (40 marks)

χ^2 table

Two-sided significance level d.f.	0.10	0.05	0.02	0.01
	Critical value χ^2			
1	2.706	3.841	5.412	6.635
2	4.605	5.991	7.824	9.210
3	6.251	7.815	9.837	11.345
4	7.779	9.488	11.668	13.277
5	9.236	11.070	13.388	15.086

Part E

- 5.
 - 5.1 A researcher wants to find out the level of physical activity and risk of myocardial infarction (MI) among males of 50 – 70 years age. He selected 100 patients admitted to cardiology unit with MI and selected a control group of 100 individuals of same age group from hospitalized patients. He used a physical activity index of more than 2500 kcal/day (A) for this purpose as the suspected risk factor. Other confounders were controlled and the study was performed.

The study revealed that out of 100 cases and 100 controls 30 and 60 belonged to physical activity index of A respectively. Comment on this suspected factor(A). (50 marks)
 - 5.2 Describe a cohort study design. What are the advantages and disadvantages of this design. (50 marks)