UNIVERSITY OF RUHUNA
FACULTY OF MEDICINE

THIRD EXAMINATION FOR MEDICAL DEGREES PART II, 25TH AUGUST 2005
COMMUNITY MEDICINE PAPER I

Answer **ALL FIVE** questions
Answer each part in a *SEPARATE* book   Duration: Three Hours
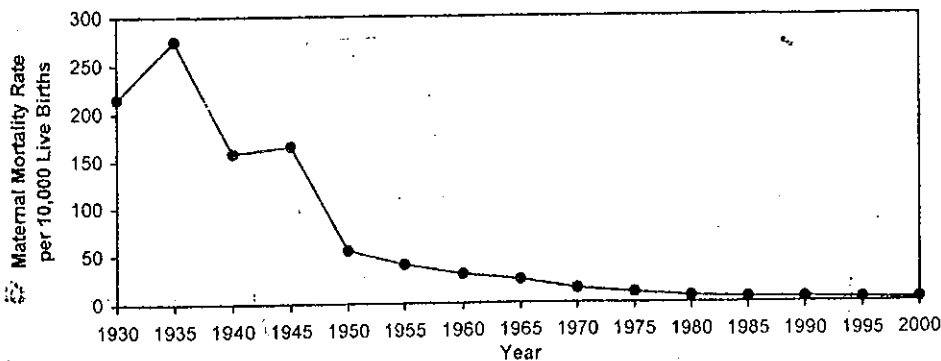
Part A

1   1.1 Write notes on the following.
  1.1.1 Objectives of School Medical Inspection.   *(20 marks)*
  1.1.2 Course of action taken by medical personnel when school children
    with defects are detected.   *(30 marks)*

 1.2 Discuss the role of Primary Care Physician in Occupational Health.   *(50 marks)*

2   2.1 Define the following giving the equation of each
  2.1.1 Crude birth rate   *(10 marks)*
  2.1.2 Crude death rate   *(10 marks)*
  2.1.3 Rate of natural increase   *(10 marks)*
  2.1.4 General fertility rate   *(10 marks)*

 2.2 List the factors affecting fertility.   *(15 marks)*

 2.3 Briefly describe the following
  2.3.1 Health hazards due to improper disposal of solid wastes. *(20 marks)*
  2.3.2 Procedure adopted in the chlorination of a domestic well. *(25 marks)*

Part B

3   3.1
  3.1.1 Describe your role as DDHS (MOH) of a Health Unit Area
    in controlling malnutrition in pre-school children.   *(35 marks)*

  3.1.2 List clinical manifestations of zinc deficiency.   *(15 marks)*

 3.2

  3.2.1 Describe the above graph and comment on the trend shown   *(20 marks)*

  3.2.2 Indicate the possible reasons for the trend that you have noted
    under 3.2.1   *(30 marks)*

Part C

4 4.1 What are the criteria to justify screening for a disease?   *(40 marks)*

4.2 Briefly explain the "lead time bias" and "length bias".   *(30 marks)*

4.3 What are the different types and sources of "Errors" in epidemiological studies?   *(30 marks)*

5 5.1 Briefly explain the Null Hypothesis in significance testing and the two risks involved with it.   *(40 marks)*

5.2 A researcher was interested in finding the effect of education through audio visual aids when compared to the use of reading materials.
He selected two groups of 10 subjects each. Each group was randomly selected and randomly assigned to each method of education. One group watched the audio visual aids (group A) and the other group (group B) read some leaflets on the same subject. After 30 minutes, both groups were subjected to a written test which was marked out of 20. Results were as follows.

Group A	Group B
17	13
16	12
16	11
15	10
14	9
16	10
15	11
13	13
17	12
18	8

Was there a significant difference between two groups?   *(60 marks)*

Critical values of t

df.	Level of significance for two tail test	
	0.05	0.01
1	12.706	63.657
3	3.182	5.841
6	2.447	3.707
9	2.262	3.250
12	2.179	3.055
15	2.131	2.947
18	2.101	2.878
21	2.080	2.831

X^2 Distribution

df.	p value	
	0.05	0.01
1	3.84	6.64
3	7.82	11.35
6	12.59	16.81
9	16.92	21.67
12	21.03	26.22
15	25.00	30.58
18	28.87	34.81
21	32.67	38.93