UNIVERSITY OF RUHUNA
FACULTY OF MEDICINE

THIRD EXAMINATION FOR MEDICAL DEGREES PART II, JULY/AUGUST 2013
COMMUNITY MEDICINE PAPER I

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

Time: 09.00 a.m. – 12.00 noon
Duration : Three Hours

PART A

1.1 If you were appointed as the Medical Officer of Health in a Health Unit area, how would you make sure that women in the reproductive age group receive proper maternal health services under the "Safe Motherhood Programme"? *(60 marks)*

1.2 Describe the measures adopted to control leptospirosis among agricultural workers in a Health Unit area. *(40 marks)*

PART B

2.1 Explain, briefly the following:
   2.1.1 Correlation coefficient *(15 Marks)*
   2.1.2 Characteristics of normal curve *(15 Marks)*

2.2 A research has been conducted to find out whether there is a difference between verbal abuse for boys and girls. A representative sample of 600 children (300 boys and 300 girls) was interviewed by psychologists using a questionnaire to identify those who were exposed to verbal abuse in the past. It was found that 80 boys and 40 girls were exposed to severe verbal abuse at home.

   2.2.1 Write the null hypothesis. *(10 marks)*
   2.2.2 Prepare a 2 X 2 contingency table. *(20 marks)*
   2.2.3 Test the null hypothesis at 5% level. *(40 marks)*

PART C

3.1 What advice would you give as a Medical Officer of Health (MOH) to the Family Health Midwives in your area on improving the nutritional status of pre-school children? *(50 marks)*

3.2 Write short notes on
   3.2.1 weight gain during pregnancy. *(25 marks)*
   3.2.2 supplementary feeding. *(25 marks)*

PART D

4.
4.1 4.1.1 List green house gases that contribute to the increase in global temperature. *(5 marks)*
   4.1.2 What are the human activities that contribute to global warming? *(10 marks)*
   4.1.3 Briefly describe the health impact of global warming. *(35 marks)*

4.2 A large hospital has a trauma centre. It is used as a referral centre by surrounding hospitals to refer traumatized patients. This trauma centre asks the Health authorities to increase their budget to expand their facilities. In order to take a decision Health authorities want to compare the effectiveness of the trauma centre with that of the surrounding hospitals. Following data have been collected for this purpose covering a period of one month.

Severity of trauma	Surrounding hospitals		Trauma centre	
	No. of cases	No. of deaths	No. of cases	No. of deaths
Mild	3000	100	1000	50
Moderate	2000	200	5000	250
Severe	1000	300	4000	800
Total	6000	600	10,000	1100

Compare the mortalities of the trauma centre with that of the surrounding hospitals and comment on the effectiveness of the trauma centre.

(50 marks)

PART E

5. In a cohort study done to assess the relationship of cigarette smoking (exposure) with lung cancer and coronary heart disease deaths (outcomes) the following results were obtained.

For lung cancer   Relative Risk(RR)   = 14
                  Attributable Risk(AR) = $130/10^5$/year

For coronary heart disease deaths   RR   = 1.6
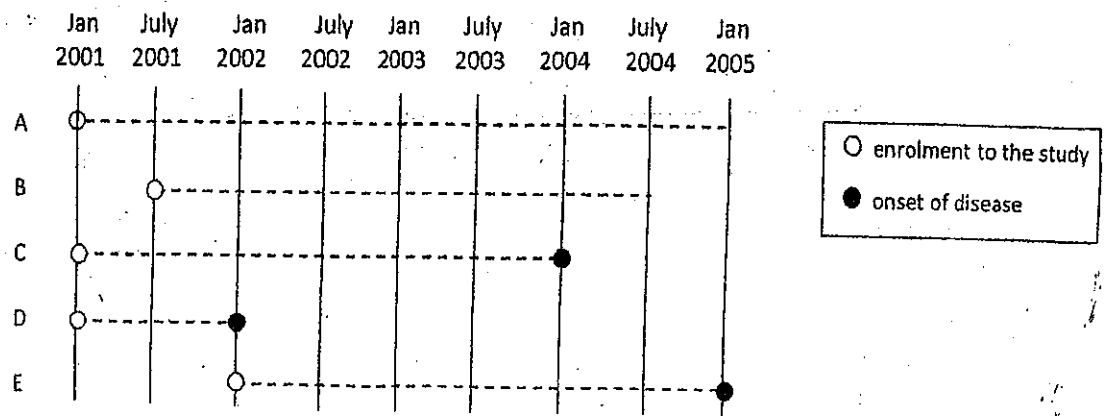   AR   = $256/10^5$/year

5.1 Comment on the above findings defining the RR and AR.

(40 marks)

5.2 What is the importance of RR and AR for a medical practitioner?

(30 marks)

5.3 Five subjects (A-E) have been followed up for development of a disease for varying periods of time as marked below.

5.3.1 Calculate the incidence density and period prevalence from 2001-2005.

(20 marks)

5.3.2 List FIVE conditions that could influence the prevalence.

(10 marks)