UNIVERSITY OF RUHUNA
FACULTY OF MEDICINE

THIRD EXAMINATION FOR MEDICAL DEGREES (PART II) OCTOBER 2012
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.

1.1 Describe the role of Medical Officer of Health (MOH) in delivering maternal health services in his MOH area.   *(50 marks)*

1.2 Describe the occupational health problems of nurses.   *(50 marks)*

PART B

2.

2.1 Describe in detail the demographic transition cycle using graphs.   *(50 marks)*

2.2 2.2.1 Describe the health hazards due to ionizing radiation.   *(30 marks)*

　　2.2.2 List the measures available to minimize the risk of exposure to ionizing radiation among patients and staff in a hospital setting.   *(20 marks)*

PART C

3.

3.1 Describe Metabolic Syndrome (MS) stating the diagnostic criteria.   *(20 marks)*

3.2 What are the guidelines on healthy eating that a doctor should follow in advising the patients diagnosed as having MS?   *(40 marks)*

3.3 Briefly describe the importance of nutrition intervention in school children.   *(40 marks)*

PART D

4.

4.1 List three observational study designs.   *(15 marks)*

4.2 List two sources of error in epidemiological studies.   *(10 marks)*

4.3 A new screening test to detect depression was evaluated. Clinical investigation by a Psychiatrist was taken as the gold standard. Three hundred people were screened. Of the 100 people who were positive on the screening test, 80 people were positive on the gold standard. Of the 200 people who were negative on the screening test, 40 people were positive on the gold standard.

　　4.3.1 Construct a 2 x 2 table to present data.   *(15 marks)*

　　4.3.2 Calculate the sensitivity of the screening test.   *(20 marks)*

　　4.3.3 Calculate the specificity of the screening test.   *(20 marks)*

4.4 Alcohol-use-behavior is a major risk factor of non-communicable diseases in Sri Lanka.

　　4.4.1 List two strategies that can be used by the health authorities in an MOH area to control alcohol-use-behavior of people in the area.   *(10 marks)*

　　4.4.2 List two strategies used by the Government to control alcohol-use-behavior among Sri Lankans.   *(10 marks)*

5.

5.1 List three characteristics of the normal curve. *(15 marks)*

5.2 List three characteristics of the standard normal curve. *(15 marks)*

5.3 The sample mean of the BMI of 100 factory workers was 24 kg/m² and Standard Deviation was 3kg/m².

   5.3.1 Calculate the standard error of mean of the sample mean. *(10 marks)*

   5.3.2 Calculate the 95% confidence interval of the sample mean. *(10 marks)*

5.4 Immunization status of a group of 300 randomly selected children aged between 1-5 years in a DDHS area was obtained. Results are given below.

	Immunized	*Not-immunized*
Male	150	50
Female	20	80

The researcher is interested in identifying whether there is a gender difference in immunization status of the children aged between 1-5 years in this target population.

5.4.1 State the null and alternative hypotheses. *(20 marks)*

5.4.2 Test the null hypothesis at 5% significance level. *(30 marks)*