

UNIVERSITY OF RUHUNA
FACULTY OF MEDICINE



THIRD EXAMINATION FOR MEDICAL DEGREES PART II, 16th DECEMBER 2016
COMMUNITY MEDICINE PAPER I

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

Time: 9.00 am – 12.00 noon
Duration: 3 hours

PART A

1.
 - 1.1 Briefly describe the relationship between nutrition and infections. *(15 marks)*
 - 1.1.1 Outline the nutritional interventions available under the Family Health Programme to manage nutritional deficiencies associated with childhood infections *(35 marks)*
 - 1.2 Non-communicable diseases show an increasing trend in comparison to communicable diseases in Sri Lankan population over the last few decades.
 - 1.2.1 List **two** (2) sources of data which help to confirm the above statement *(10 marks)*
 - 1.2.2 Briefly describe the reasons for the increased prevalence of non-communicable diseases. *(40 marks)*

PART B

2.
 - 2.1 According to the records of doctor of the cement factory Galle, a large proportion of workers had exacerbation of bronchial asthma and other respiratory problems due to exposure of dust during last two years. What steps you would recommend to the management of the cement factory to minimize the occupational exposure of dust and minimize respiratory problems among cement factory workers? *(50 marks)*
 - 2.2 Define the following terms.
 - 2.2.1 Unmet needs of family planning *(10 marks)*
 - 2.2.2 Contraceptive prevalence rate *(10 marks)*
 - 2.2.3 You have been appointed as the Medical Officer of Health (MOH) in a health unit area recently. During the initial survey it was found that the contraceptive prevalence rate for modern methods of the area is 33% and the unmet need of family planning is 40%.

Briefly describe the activities that you would carry out with regard to the contraceptive prevalence rate and unmet need of family planning in your area. *(30 marks)*

PART C

- 3.
- 3.1 "It is expected to build a nuclear power plant in Sri Lanka to meet the growing energy demand in future".
Briefly describe the possible health problems that can arise due to a nuclear power plant, using examples. *(50 marks)*
- 3.2 Briefly write on demographic projections of future Sri Lankan population. *(50 marks)*

PART D

- 4.
- 4.1 List Two (2) examples to illustrate each of the following terms.
- 4.1.1 Interval scale variables
 - 4.1.2 Normally distributed variable
 - 4.1.3 Probability sampling method
 - 4.1.4 Descriptive statistic
 - 4.1.5 Modifiable behavioural risk factors. *(40 marks)*
- 4.2 A research has been conducted to find out whether there is a gender difference of Chronic Kidney Diseases (CKD) in people living in Hambantota. A representative sample of 400 people (200 men 200 women) was surveyed. It was found that 40 men and 20 women were having CKD.
- 4.2.1 Write the null hypothesis. *(10 marks)*
 - 4.2.2 Prepare 2 x 2 contingency table. *(10 marks)*
 - 4.2.3 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 3.84)

PART E

- 5.
- 5.1 A dinner was given to 120 people and next morning some of them developed acute gastroenteritis (AG). Outbreak Investigation revealed the following results.

Food item		AG +	AG -
Beef	yes	50	10
	No	40	20
Chicken	Yes	85	15
	No	5	15
Vegetable	Yes	35	5
	No	55	25

- 5.1.1 Explain the type of this outbreak. *(10 marks)*
 - 5.1.2 Which food item is the most likely cause for this problem?
Provide epidemiological calculations to support your decision using above data. *(40 marks)*
- 5.2 "A study revealed that a particular virus causes obesity in children".
Describe the specific criteria to establish this relationship. *(50 marks)*