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UNIVERSITY OF RUHUNA  
 FACULTY OF MEDICINE



THIRD EXAMINATION FOR MEDICAL DEGREES PART II, SEPTEMBER 2014  
 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. You were appointed as the Medical Officer of Health (MOH) of Bope-Poddala Health Unit Area.
- 1.1.1 List the registers and records that would help you to assess the child health status of your area. (15 marks)
- 1.1.2 Describe how you would provide child health care in your MOH area. (35 marks)
- 1.2 "Health care workers in Sri Lanka are susceptible to occupational hazards". Comment on the above statement. (50 marks)

**PART B**

2. An 8-month-old girl was brought to the field weighing post by her mother for weighing. The Public Health Midwife (PHM) noticed that the child's weight is currently in the light green region of the growth chart and she has not gained weight adequately for the last two months. She was a term baby with a normal birth weight. Both her parents work as estate labourers and the child is kept at the day care facility of the estate during their working hours.
- 2.1 List possible reasons for the findings observed by the PHM. (20 marks)
- 2.2 How can you use the growth curve to identify the causes for the growth faltering in this child? (40 marks)
- 2.3 If you are the Medical Officer of Health (MOH) in this area, what actions would you take regarding this child? (40 marks)

**PART C**

3. The following table shows data from an epidemiological study.

3.1 What type of study was this most likely to be. Explain briefly. (15 marks)

|                  | No. of episodes | Person Year (PY) at risk |
|------------------|-----------------|--------------------------|
| Exposure present | 700             | 1 950                    |
| Exposure absent  | 300             | 2 250                    |
|                  | 1 000           | 4 200                    |

$$\frac{\text{N of new cases}}{\text{Person yrs at risk}}$$

$$\frac{700}{1950} \times 10$$

- 3.2 What is the incidence rate among those who are exposed to the factor under study? (25 marks)
- 3.3 What is the rate difference? (25 marks)
- 3.4 What is the population attributable risk? (35 marks)

Exposure

$$IR = \frac{I_p - I_u}{I_p} \times 100$$
  

$$PAR = \frac{I_p - I_u}{I_p} \times 100$$
  

$$RR = \frac{I_p}{I_u}$$
  

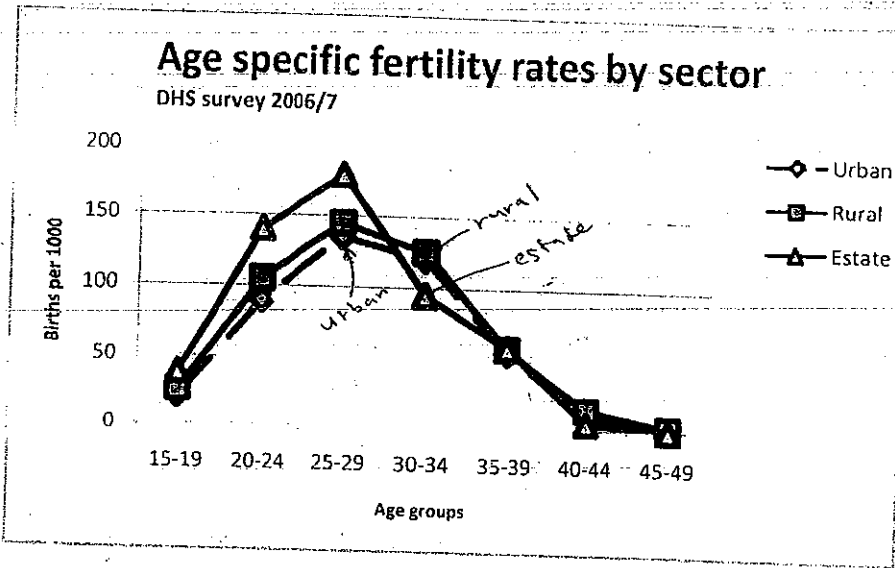
$$PAR = \frac{RR - 1}{RR}$$
  

$$PARF = \frac{RR - 1}{P(RR - 1) + 1}$$

**PART D**

4. **Environment**

- 4.1.1 List different types of health care waste, giving examples. (15 marks)
- 4.1.2 Describe a suitable system for management of health care waste in a primary care institution. (35 marks)
- 4.2 The following graph shows the Age Specific Fertility Rates (ASFR) in different sectors of Sri Lanka in year 2006



- 4.2.1 Compare the fertility rates in different sectors in Sri Lanka. (30 marks)
- 4.2.2 What factors might have affected this change in fertility levels in different sectors in Sri Lanka? (20 marks)

**PART E**

- 5.1.1 List 3 examples of interval scale variables. (9 marks)
- 5.1.2 List 3 characteristics of standard normal distribution. (9 marks)
- 5.1.3 The sample mean of the HDL level of 60 students was 56 mg/dL and the 95% confidence interval of the sample mean was  $56 \pm 3$  mg/dL. Explain this Statement. (12 marks)

5.2 Computer literacy of a group of 200 randomly selected people was obtained. Results are given below.

|            | Male | Female |
|------------|------|--------|
| Literate   | 100  | 70     |
| Illiterate | 20   | 10     |

The researcher is interested in identifying whether there is a gender difference in computer literacy level of this target population.

- 5.2.1 State the null and alternative hypotheses (10 marks)
- 5.2.2 Test the null hypothesis at 5% significance level (40 marks)
- 5.3 Briefly explain "The Ottawa Charter for Health Promotion" (20 marks)

make principals policies.  
 environment modification.  
 community participation.  
 improve skills

2 → 1.96  
 2 → 3.84

war enor  
 global  
 EXP-FACTOR  
 group under  
 FP  
 en demic d.  
 disease