

UNIVERSITY OF RUHUNA

Bachelor of Science in Fisheries and Marine Sciences degree

Level III Semester I – 2017 July/August

LIM3122 Ecological and Human Health risk of Pollutants

Answer all questions

Time: 2 hours

1. Human urine samples were collected from 15 males and 15 females of a sugarcane farming community to determine serum creatinine and glyphosate in human urine. The concentration values and other relevant data are given in the following table. Analyse the data given in the table using appropriate risk assessment equations and describe the health risk associated with the exposure of glyphosate in this community. The No Observable Effect concentration (NOEC) for serum creatinine is 2mg/dl.

Serum creatinine level (mg/dl)	Urine Glyphosate ($\mu\text{g/L}$)	Sex	Age (years)	Body weight (kg)
1.4	0.54	Male	50	60
1.4	0.55	Male	52	62
1.5	0.58	Male	51	65
1.5	0.6	Male	54	62
1.5	0.8	Male	53	61
2.2	1.25	Male	56	63
2.1	1.35	Male	58	63
2.2	1.5	Male	57	64
1.6	1.25	Male	50	61
1.7	1.4	Male	52	62
1.6	1.5	Male	55	64
2.1	1.4	Male	56	63
1.7	1.35	Male	54	62
1.6	1.25	Male	55	64
2.3	1.51	Male	56	65
1.2	0.32	Female	50	52
1.1	0.18	Female	50	54
1.2	0.25	Female	52	53
1.2	0.26	Female	50	48
1.1	0.25	Female	52	52

