UNIVERSITY OF RUHUNA

BACHELOR OF SCIENCE IN FISHERIES AND MARINE SCIENCES DEGREE

Level II Semester I Examination

July 2015

LIM 2121 - Aquatic Biodiversity

Time: 01 hour

Answer **all** questions.

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01. Macro benthos samples were collected from eight sites located at 200m distance from a stream to study the relationship between species diversity and organic matter content in soil. The following table gives mean abundance of different species and mean organic matter concentration at the eight sites.

Sampling site	Mean Organic matter content (µg/g dry weight)	Mean abundance (number/m^2)							
		Hydrophilidae (order: Coleoptera)	Gyrinidae (order:	Psephenidae. (order: Coleoptera)	Potamathidae (order: Enhemeroptera)	Ephemeridae: (order: Enhemeroptera)	Canidae: (order: Ephemeroptera)	Calopterygidae (order:Odonata)	Perlidae: (order Plecoptera)
1	1.28 ± 1.4	17	13	15	24	34	18	85	28
2	2.30 ± 1.2	18	17	25	25	21	17	88	18
3	4.25 ± 0.5	29	26	25	28	26	20	82	25
4	8.75 ± 1.5	20	28	30	17	15	14	67	18
5	10.52 ± 2.4	32	38	27	10	13	13	64	14
6	22.31 ± 1.9	28	26	27	14	12	12	55	13
7	42.08 ± 2.1	18	22	26	10	09	13	42	11
8	74.73 ± 1.1	14	30	22	05	06	09	31	09

1.1 Explain the relationship between the organic matter concentration in soil and diversity of macrobenthos in the stream

1.2 Identify the keystone species from the collected species and describe their role to the functions of the ecosystem

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