

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF MASTER OF SCIENCE IN PURE MATHEMATICS

MATH 890: RESEARCH METHODOLOGY

STREAMS:

TIME: 3 HOURS

DAY/DATE: THURSDAY 14/12/2017

2.30 P.M – 5.30 P.M

INSTRUCTIONS:

- Answer any three questions

1. (a) Highlight five types of research on the basis of the method of research. [5marks]
(b) Explain five purposes of a research design. [10marks]
(c) State at least five basic rules in APA referencing style. [5marks]
2. (a) Highlight five sources of pure mathematics research problems. [5marks]
(b) Briefly explain each of the following research methods. [6marks]
 - (i) Historical research method .
 - (ii) Descriptive or survey method
 - (iii) Experimental method
(d) Change the following references to the APA format style. [5marks]
 - (1) H.B Stenzel, successional speciation in paleontology: The case of the oysters of the sellaeformis stock, *evolution*, 3(1949), 33 -50.
 - (2) J.Felsentein, *inferring phylogenetie*, sinauer, sunderland,M.A, 2004.

(3) N.Eldredge and J.Cracraft, *phylogenetic patterns and the evolutionary process*, Columbia University press, New York, 1980.

(4) R.D.M Page and E.C.Holmes, *molecular Evolution; A phylogenetic spproach*, Blackwell science, Oxford, UK, 1998.

(5) L.Pachter and B. Sturmfels, *Algebraic statistic for computational Biology*, Cambridge University Press, Cambridge, UK, 2005.

(6) C. Zimmer, what is a species?, *sci.Amer*, 298-6 (2008),72 – 79.

3. (a) Describe at least four requirement of a research problem. [8marks]
(b) Highlight six features of a good research report. [6marks]
(c) Highlight the main parts of a research report. [6marks]
4. (a) Highlight the main parts of an abstract. [5marks]
(b) Describe the main requirements of a good objective. [10marks]
(c) Explain the difference between a reference and a bibliography. [2marks]
(d) Highlight at least three referencing styles. [3marks]
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