



MACHAKOS UNIVERSITY

University Examinations 2018/2019

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

FOURTH YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF EDUCATION (SCIENCE)

BACHELOR OF SCIENCE IN BIOLOGY

SZL 415: ECOLOGY FOR SUSTAINABLE DEVELOPMENT

DATE: 23/7/2019

TIME: 8.30-10.30 AM

INSTRUCTIONS

SECTION A

QUESTION ONE COMPULSORY (30 MARKS)

- a) The SCALE of understanding sustainability may be divided into three categories. Namely? (3 marks)
- b) Development activities are considered NOT sustainable when they are (3 marks)
- c) Outline atleast THREE importances of ecosystem goods and services in economic decisions (3 marks)
- d) Describe the key environmental Strategies and strategists which are a preliquisite for ecological sustainability (3 marks)
- e) Name the Ecological Models of ecological sound Agriculture (3 marks)
- f) What are the factors considered when Selecting livestock breeds/ strains for sustainable organic farming:
- g) Why should one not advocate for an environmental Impact assessment (EIA) before setting up a development activity. (3 marks)

- h) Describe the Development impact assessment In the context of the Free Zone Initiative (3 marks)
- i) Name the main causes of habitat alteration and loss. (3 marks)
- j) Describe how climate change causes biodiversity loss and habitat alteration (3 marks)

SECTION B

QUESTION TWO

Describe the parameters for low-input technology which promote agro-ecology (20 marks)

QUESTION THREE

Describe the Sustainable development goals (SDGs) in relation to ecology (20 marks)

QUESTION FOUR

As a coastal zone land manager, describe the guiding principles for ensuring an Integrated Coastal zone management (ICZM) (20 marks)

QUESTION FIVE

Giving examples, describe the main groups which ecosystem services can be categorized (20 marks)