LAIKIPIA UNIVERSITY

UNIVERSITY EXAMINATIONS

1ST SEMESTER 2022/2023 ACADEMIC YEAR

FOURTH YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE (ENVIROMENTAL SCIENCE)

ENSC 424: ENVIROMENTAL PLANNING AND PROJECT ANALYSIS

STREAM: R ***TIME: 2 HRS***

DAY: TUES [8.30AM – 10.30AM] ***DATE: 06/12/2022***

THIS QUESTION PAPER CONSISTS OF THREE (3) PAGES

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INSTRUCTIONS: - Answer question ONE and any other TWO

QUESTION ONE

(a) Why is environment project appraisal important? (2 marks)

(b) Briefly explain the concept of 'Environmental Valuation' (3 marks)

(c) Describe the design stages in'Choice Modelling Technique' as used in Environmental Planning (4 marks)

(d) Identify and briefly explain **FOUR** main elements of present-day Environmental Planning (4marks)

(e) Illustrate and briefly explain the Environmental Kuznets Curves (8 marks)

(f) Differentiate between Net present value (NPV) and Internal Rate of Return (IRR) (4 marks)

(g) The catering management of Laikipia University uses discounted payback period to evaluate investments in capital assets. The university expects the following annual cash flows from an investment of Kshs. 3,500,000:

Years	**Cash flows (Kshs)**
0	3,500,000
1	900,000
2	900,000
3	900,000
4	900,000
5	900,000
6	900,000
7	900,000
8	900,000

NB- No salvage/residual value is expected. The University's cost of capital is 12%.

(i) Compute discounted payback period of the investment (4 marks)

(ii) Is the investment desirable if the required payback period is 4 years or less? (1 marks)

QUESTION TWO

(a) Differentiate between 'Consumer Surplus' and 'Producer Surplus'. (8 marks)

(b) Discuss the stages of Cost Benefit Analysis (CBA). (12 marks)

QUESTION THREE

(a) In your own opinion, debate on whether or not monetary values should be attached to natural resources in decision-making. (10 marks)

(b) Briefly discuss **FIVE** advantages of regular project monitoring. (10 marks)

QUESTION FOUR

(a) Illustrate and briefly discuss the **MAIN** phases of project life cycle. (10 marks)

(b) Identify **FIVE** limitations of Benefits Transfer Method as used in environmental planning (10 marks)

QUESTION FIVE

(a) Deliberate on **FIVE** different methods used in monitoring a project. (10 marks)

(b) Differentiate between ‘Safe Minimum Standards’ and ‘The Precautionary Principle’ (10 marks)