BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF AGRICULTURE AND ENVIRONMENTAL SCIENCES

DEPARTMENT: NATURAL RESOURCES

PROGRAMME: Natural Resources Management

COURSE CODE: NR222: NATURAL RESOURCES MANAGEMENT

DURATION: 2 HOURS   TOTAL MARKS: 70

INSTRUCTIONS TO CANDIDATES

Answer **THREE** questions out of the following five questions. You must answer question **One** from **SECTION A** and any **Two** questions from **SECTION B**.

SECTION A (COMPULSORY) [30 Marks]

1. (a) What do you understand by the term "Participatory Rural Appraisal" (PRA)?   [2 Marks]

    (b) What are the major features of the PRA in natural resources management?   [2 Marks]

    (c)   (i) Explain the importance of land use planning (LUP) in natural resources management   [2 Marks]

    (ii) Write down two techniques that are used to assess natural resources potential for LUP   [2 Marks]

    (iii) Mention **Two** (2) main sources of secondary natural resources information for land use planning   [2 Marks]

    (iv) Give **Two** (2) types of map scales you have learnt in Class   [2 Marks]

    (e)   (i) Write down **Two** (2) major causes of land degradation in upland areas?   [2 Marks]

    ii) Explain how deforestation contributes towards land degradation and climate change   [2 Marks]

    (iii) What land restorative activities are most appropriate for communities to adopt in deforested and fire damaged natural forests?   [3 Marks]

(f) Choose the best answer

   (i) Which of these factors do not lead to forest degradation

A   Fire damage
B   Deforestation
C   Agroforestry
D   All of the above
E.   None of the above   [1 Mark]

(ii) The major disadvantage of Community based natural
resources management is that the approach promotes:

A   Exclusivity
B   Selectivity
C   Inclusivity
D   All of the above
E   None of the above   [1 Mark]

(iii) An appropriate technique developed for assessing the level
of soil degradation in croplands under Zimbabwean conditions is
called

A   Universal soil loss equation for southern Africa
B   Environmental Impact Assessment for southern Africa
C   Soil loss estimation model for southern Africa
D   All of the above
E   None of the above   [1 Mark]

(iv) In the USDA land capability classification system

A   Class I is a highly suitable land
B   Class II is moderately suitable land
C   Class III marginally arable land
D   Class IV is unsuitable land
E   Class V superior land   [1 Mark]

(v) What name do you give to international arrangements by different nations to
protect natural resources and the environment?

A   Statement
B   Ruling
C   Convention
D   Consent
E   Communique   [1 Mark]

(g) What are the main arguments in favour of devolution of power and
responsibility for natural resource management in provincial areas of
Zimbabwe   [2 Marks]

(h) Show how bush encroachment contributes towards and land
degradation in Zimbabwe   [2 Marks]

(i) Suggest Two (2) ways by which invasive alien plant species can be managed in Zimbabwean natural forests [2 Marks]

SECTION B [40 marks]

2. (a) Briefly explain the term "Soil degradation." [4 Marks]

    (b) Describe any Six (6) symptoms of Soil degradation. [6 Marks]

    (c) How would you apply sustainable agricultural activities in natural resources management to reduce soil degradation in grazing areas? [5 Marks]

    (d) Suggest Five (5) ways by which Soil degradation in wetlands can be reduced [5 Marks]

3. (a) What do you understand by the term "Afforestation"? [4 Marks]

    (b) Briefly explain the negative impacts of artisanal mining on natural resources in rural areas and suggest ways by which they can be reduced. [6 Marks]

    (c) Describe any Five (5) common anthropogenic activities that trigger forest degradation and suggest ways by which they can be managed. [10 Marks]

4. Describe the main features of either Conventional OR Integrated natural resource management approaches and illuminate the strengths and weaknesses of the approach in natural resources management in a district in Zimbabwe [20 Marks]

5. Discuss the advantages and disadvantages of "Community empowerment" as a strategy for the management of natural resources in rural areas of Zimbabwe. [20 Marks]

END OF PAPER