EX0024B

BINDURA UNIVERSITY OF SCIENCE EDUCATION

DEPARTMENT OF ENVIRONMENTAL SCIENCE

BSC SAFETY, HEALTH AND ENVIRONMENTAL MANAGEMENT

MSc OHSEM Part I Examination

APPLIED ENVIRONMENTAL AND NATURAL RESOURCES ECONOMICS
MOHS 511

3 HOURS
INSTRUCTIONS JUN 2024

Answer QUESTION ONE from SECTION A and any other two questions from SECTION B.

Question one carries 50 Marks and the rest 25 Marks each.

SECTION A (COMPULSORY)

(a) Explain the following terms:

(i)	Efficiency	**[2 Marks]**
(ii)	Optimality	**[2 Marks]**
(iii)	Compensation variation	**[3 Marks]**
(iv)	Equivalence variation	**[3 Marks]**
(v)	Stock pollutant	**[2 Marks]**
(vi)	Fund pollutant	**[2 Marks]**
(vii)	Flow pollutant	**[2 Marks]**
(viii)	Hartwick's rule	**[2 Marks]**
(ix)	Hotelling's rent	**[2 Marks]**
(x)	IPAT identity	**[10 Marks]**
(xi)	With the aid of examples explain the different types of economic values.	**[16 Marks]**

(b) Create an IPAT identity for the use of petrol in Zimbabwe. **[4 Marks]**

Section B

2. (a) Discuss the applicability of the environmental Kuznets curves in the relationship of society and natural resources. **[20 Marks]**

(b) Explain the steady state conditions in an open access fishery. **[5 Marks**

3. (a) Build a case on the need for valuation of environmental resources. **[10 Marks]**

(c) Explain the biases inherent in the contingent valuation method of environmental valuation. **[10 Marks]**
Explain the limitations of the travel cost method in environmental valuation. **[5 Marks]**

4. Discuss the three pillars of Environmental, Social and Governance as a framework to assess business practices.. **[25 Marks]**

5. (a) The following equations refer to an open access fisheries situation

(where S=Stock, H= Harvest, and E= Effort), with the aid of examples explain the equations below:

(i) dS/dt=G(S) **[5 Marks]**

(ii) H/E=eS **[6 Marks]**

(iii) Sdot=G(S)-H **[5 Marks]**

(b) (b) Explain the objectives of Natural Resources Accounting. **[5 Marks]**

(c) Explain the two characteristics of a perfect competition model inherent in an open access fishery **[4 Marks]**

END OF PAPER