

BINDURA UNIVERSITY OF SCIENCE EDUCATION

CHEMISTRY DEPARTMENT

CH404: ENVIRONMENTAL MANAGEMENT

MAR 2024

2 HOURS

ANSWER QUESTION 1 AND FOUR (4) OTHER QUESTIONS. EACH QUESTION CARRIES 20 MARKS

1. (a) Distinguish between ionization wet scrubbers and dry scrubbers. [8 marks]
(b) Give the 6 major source groupings for toxic organic compound emissions. [6 marks]
(c) Describe the three stances environmental management can adopt. [6 marks]
2. Define the following with regard to forms of regulation or legislation in environmental management.
(a) (i) Principle
(ii) Standard
(iii) Guideline
(iv) Directive
(v) Licence [5 × 2 marks]
(b) Describe any five demands that companies embracing eco-efficiency have to meet. [10 marks]
3. Explain any ten principles for environmental management's business charter for sustainable development. [20 marks]
4. (a) Define the following environmental systems
(i) Isolated system
(ii) Closed system
(iii) Open system
(iv) Controlled system [4 × 2 marks]
(b) Environmental management may be funded and encouraged by national and international taxation. Describe the following taxes and their objectives.
(i) Carbon emissions taxes
(ii) Green taxes
(iii) Energy use taxes [3 × 4 marks]

5. During waste processing and handling, how is the following done ?

- (a) Chemical Stabilization-Fixation
- (b) Volume Reduction
- (c) Waste Segregation
- (d) Degradation
- (e) Encapsulation

[5 × 4 marks]

6. Describe the key aspects of the Paris Agreement (2015).

[20 marks]

END OF PAPER