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KIBABII UNIVERSITY

**UNIVERSITY EXAMINATIONS
2019/2020 ACADEMIC YEAR**

**THIRD YEAR SECOND SEMESTER
SUPPLEMENTARY EXAMINATIONS**

FOR THE DEGREE OF BSC (CHEMISTRY)

COURSE CODE: SCH 353

COURSE TITLE: WASTES AND CONTAMINATED SOLID
MANAGEMENT

DATE: 16/02/21 **TIME:** 11-1pm

INSTRUCTIONS TO CANDIDATES:

TIME: 2 Hours

Answer **question ONE** and any **TWO** of the remaining

KIBU observes ZERO tolerance to examination cheating

Question 1 [30 Marks]

- a. Define Zero waste goal [2 Marks]
- b. Highlight 4 objectives of solid waste management programs [4 Marks]
- c. Highlight 5 methods of solid waste disposal [5 Marks]
- d. Explain the steps in landfill method of solid waste disposal [4 Marks]
- e. What are potential health risks that can be associated with handling of health-care facility waste? [4 Marks]
- f. Highlight 3 commonly used classifications of wastes giving 2 examples of each [9 Marks]
- g. Highlight the classifications of hazardous wastes [2 Marks]

Question 2 [20 Marks]

- a. Describe the 5 R's of waste management in order of preference [15 Marks]
- b. Highlight the obstacles to resource recovery from wastes [5 Marks]

Question 3 [20 Marks]

- a. List 4 points to consider before selecting a site for open dumping [4 Marks]
- b. Describe the advantages and disadvantages of each of the following methods of waste management [16 Marks]
 - i. Landfills
 - ii. Composting
 - iii. Recycling
 - iv. Incineration

Question 4 [20 Marks]

- a. Explain the importance of studying the physical and chemical compositions of solid waste [5 Marks]
- b. Describe the process of paper recycling [15 Marks]

Question 5 [20 Marks]

- a. Highlight 5 factors that determine the generation rate of solid waste? [5 Marks]
- b. Explain the precautions that may be taken to reduce construction and demolition waste [10 Marks]
- c. Briefly describe the preparation of compost. [5 Marks]