

2528/302

2922/302

ENVIRONMENTAL WASTE MANAGEMENT,
E.I.A AND ENVIRONMENTAL LAW

June/July 2019

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN ENVIRONMENTAL SCIENCE AND TECHNOLOGY
MODULE III

ENVIRONMENTAL WASTE MANAGEMENT, E.I.A AND ENVIRONMENTAL LAW

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:
answer booklet;
non-programmable scientific calculator.

This paper consists of TWO sections; A and B.

Answer ALL the questions in section A and any THREE questions from section B in the answer booklet provided.

Each question in section A carries 4 marks while each question in section B carries 20 marks.

Maximum marks for each part of a question are as shown.

Candidates should answer the questions in English.

This paper consists of 4 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

SECTION A (40 marks)

Answer ALL questions in this section.

1. State any **four** parameters used to determine water quality. (4 marks)
2. State **four** reasons why the Kenyan Government banned the use of plastic bags. (4 marks)
3. Explain each of the following types of radioactive wastes:
 - (a) low level waste; (2 marks)
 - (b) high level waste. (2 marks)
4. List **four** methods an environmental officer can use to collect information from a person affected by the establishment of a new development project in their locality. (4 marks)
5. State **four** reasons why an environmental team must conduct screening in strategic environmental assessment. (4 marks)
6. Differentiate between baseline monitoring and impact monitoring in Environmental Impact Assessment. (4 marks)
7. State any **four** benefits of carrying out Environmental Impact Assessment in all development projects. (4 marks)
8. Outline **four** basic steps involved in making international agreements on environmental law. (4 marks)
9. State **four** remedial actions an environmental court can take in ensuring justice. (4 marks)
10. State **four** ways that environmental agencies can use to promote compliance to environmental laws in Kenya. (4 marks)



SECTION B (60 marks)

Answer any **THREE** questions from this section.

11. (a) State **three** advantages of physical-chemical wastewater treatment systems. (3 marks)
- (b) Figure 1 represents the schematic diagram of a physical-chemical treatment process of municipal wastewater.

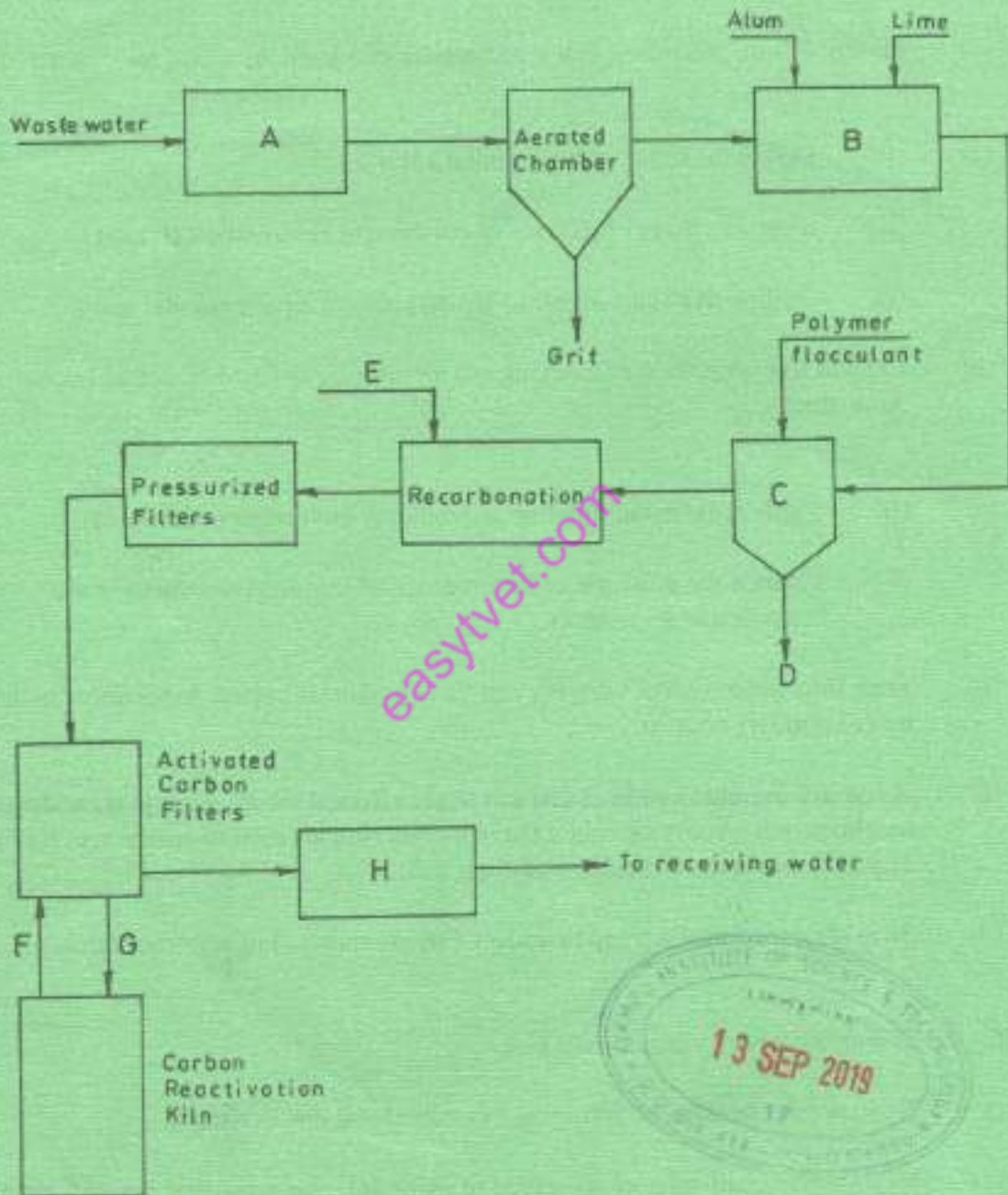


Fig.1

- (i) Identify the components labeled D, E, F and G. (4 marks)
- (ii) Describe the processes that take place in units A, B, C and H. (8 marks)



- (c) (i) Explain **two** problems caused by water hardness. (4 marks)
- (ii) Name the chemical process used to soften water. (1 mark)
12. (a) Define the term 'hazardous waste'. (2 marks)
- (b) Explain **five** characteristics of a hazardous substance. (10 marks)
- (c) Describe **four** conditions that a transporter of hazardous waste must meet. (8 marks)
- *13. (a) (i) Define the term 'environmental audit'. (2 marks)
- (ii) State any **three** objectives of conducting environmental audit. (3 marks)
- (iii) Outline **five** steps involved in carrying out environmental audit. (5 marks)
- (b) Explain **five** objectives of carrying out monitoring in Environmental Impact Assessment. (10 marks)
14. (a) (i) Explain the meaning of trans-boundary environmental impacts. (2 marks)
- (ii) Explain the principle of Environmental Impact Assessment in the trans-boundary context. (2 marks)
- (b) State **four** objectives of carrying out Environmental Impact Assessment in the trans-boundary context. (4 marks)
- (c) A country initiated a project that adversely affected the air quality of residents of a neighbouring country. Explain **three** methodologies used to conduct an Environmental Impact Assessment in such a situation. (6 marks)
- (d) State **six** contents of a trans-boundary Environmental Impact Assessment report. (6 marks)
- *15. (a) Define the term environmental law. (2 marks)
- (b) Explain **four** benefits of enforcing environmental law in Kenya. (8 marks)
- (c) Explain **five** challenges encountered in enforcing environmental law in Kenya. (10 marks)

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