

2404/306

2407/306

2411/306

LABORATORY PRACTICE AND MANAGEMENT

Oct./Nov. 2022

Time: 3 Hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

**DIPLOMA IN APPLIED BIOLOGY
DIPLOMA IN MEDICAL LABORATORY TECHNOLOGY
DIPLOMA IN ANALYTICAL CHEMISTRY**

LABORATORY PRACTICE AND MANAGEMENT

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

Answer booklet;

Battery operated 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.

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 indicated.

Candidates should answer the questions in English.

This paper consists of 3 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 the questions in this section.

1. Match the type of burn by corrosive substance in column A with suitable chemical for first aid treatment in column B.

	Type of Burn (A)		First Aid Chemical (B)
(a)	Acid burns	-	Water and sodium thiosulphate
(b)	Hydrofluoric acid burns	-	1% solution of CuSO_4 and 2% NaHCO_3
(c)	Phosphorus burns	-	Water, 5% NaHCO_3 and paste of glycerine and magnesium oxide
(d)	Bromine burns	-	Water and NaHCO_3

(4 marks)

2. Name any two examples of the following woods for making bench tops:

(a) Hard wood;

(2 marks)

(b) Soft wood.

(2 marks)

3. State four uses of laboratory animals.

(4 marks)

4. List four classes of fire and their cause in the laboratory.

(4 marks)

5. (a) State any two functions of hot air oven.

(2 marks)

(b) Explain weathering as applied in glass blowing.

(2 marks)

6. State four disadvantages of autocratic leadership.

(4 marks)

7. Explain four factors which affect development of a film.

(4 marks)

8. Explain four features of a good animal house floor.

(4 marks)

9. Outline first aid treatment for a victim of gas poisoning.

(4 marks)

10. (a) State any two methods applied in artificial respiration in first aid.

(2 marks)

(b) Distinguish between power and authority.

(2 marks)

SECTION B (60 marks)

Answer any THREE questions from this section.

11. (a) Explain **four** pumping stages of a rotary pump. (10 marks)
- (b) Explain **five** benefits of policies in an organization. (10 marks)
12. (a) Outline the procedure of centrifugation. (10 marks)
- (b) Outline the procedure of photographic printing by enlargement/projection method. (10 marks)
13. (a) Explain **five** general provisions of Factories Act in Kenya regarding employees. (16 marks)
- (b) Explain “gherao” as used in labour relations. (4 marks)
14. (a) State **six** objectives of Federation of Kenya Employers (FKE). (6 marks)
- (b) Give **six** reasons why managers do not delegate. (6 marks)
- (c) Explain **three** limitations of trait theory of leadership. (6 marks)
- (d) Define a molar solution. (2 marks)
15. (a) Explain **three** effects of vibration on laboratory equipment. (6 marks)
- (b) Explain **three** ways of overcoming the effects of vibration in the laboratory. (6 marks)
- (c) Highlight any **four** disadvantages of planning in an organisation. (8 marks)

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