

2914/201
2915/201
RESEARCH METHODS
Oct. /Nov. 2021
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN APPLIED BIOLOGY
DIPLOMA IN ANALYTICAL CHEMISTRY

MODULE II

RESEARCH METHODS

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 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 indicated.

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 **four** characteristics of a good research title. (4 marks)
2. List **four** secondary sources of data that may be available to a researcher. (4 marks)
3. Outline **four** types of information that should be contained in the preliminary pages of a research report. (4 marks)
4. Outline **four** indicators of an inappropriate research problem. (4 marks)
5. List **four** bases on which a research population may be defined. (4 marks)
6. State **four** mistakes that an entrepreneur may make when developing a business plan. (4 marks)
7. Highlight **four** challenges that may be associated with a sole-proprietorship form of business. (4 marks)
8. Explain **two** advantages of window displays as a method of sales promotion. (4 marks)
9. State **four** indicators of the need for staff training in an organization. (4 marks)
10. List **four** types of resources necessary for effective production in a manufacturing firm. (4 marks)

SECTION B (60 marks)

Answer any THREE questions from this section.

11. (a) Explain **three** merits of observation as a data collection technique. (6 marks)
- (b) Explain **two** reasons that make sampling necessary when conducting research. (4 marks)

(c) The ages of employees at Tyrin Manufacturing Works Limited are as follows:

25✓	26✓	30✓	31✓	40✓	26✓
28✓	31✓	32✓	41✓	26✓	28✓
30✓	35✓	40✓	31✓	36✓	48✓
26✓	28✓	35✓	25✓	38✓	29✓
x	x	x	x	x	x

Group the data using a class interval of two and determine the mean age. (10 marks)

12. (a) Outline **four** components of the methodology section of a research proposal. (4 marks)
- (b) Explain **four** limitations of the case study research design. (8 marks)
- (c) Explain **four** factors that may limit the use of Information Communication Technology (ICT) during research. (8 marks)

13. (a) Explain the purpose of each of the following sections of a research report:

- (i) literature review;
- (ii) results and discussion;
- (iii) summary.

(6 marks)

- (b) Table I shows the daily sales of product X in a store.

Table I

Day	Sales in kgs
Monday	75
Tuesday	120
Wednesday	12
Thursday	50
Friday	70.5
Saturday	140.5

Calculate the:

- (i) variance; s^2
(ii) standard deviation.

(14 marks)

14. (a) Explain **four** measures that the management of an organization may take to prevent employee theft and fraud. (8 marks)
- (b) Explain **four** advantages of personal selling as a method of sales promotion. (8 marks)
- (c) State **four** criteria that a viable business opportunity should meet. (4 marks)
15. (a) Pauline is in the process of writing a business plan for her business. Outline **six** types of information that she may include in the business description section. (6 marks)
- (b) State **four** indicators of an undesirable business name. (4 marks)
- (c) Explain **five** reasons that make it necessary for an entrepreneur to conduct market research. (10 marks)

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