



ZIMBABWE SCHOOL EXAMINATIONS COUNCIL
General Certificate of Education Advanced Level

GEOGRAPHY

6037/3

PAPER 3 Practical Test

NOVEMBER 2023 SESSION

3 hours

2 × 1: 50 000 survey maps of Zimbabwe are enclosed with this question paper

Additional materials:

Answer paper

Mathematical formula booklet

Calculator, graph paper

TIME 3 hours

INSTRUCTIONS TO CANDIDATES

Write your name, centre number and candidate number in the spaces provided on the answer paper/answer booklet.

Answer all questions in Section **A** and **one** question in Section **B** and **one** question in Section **C**.

Write your answers on the separate answer paper provided.

If you use more than one sheet of paper, fasten the sheets together.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets [] at the end of each question or part question.

Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

This question paper consists of 7 printed pages 1 blank page.

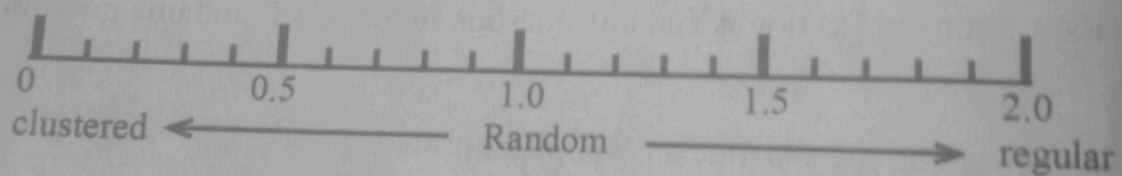
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SECTION A: STATISTICS

Answer all questions in this section.

- 1 (a) (i) Outline characteristics of a normal distribution curve. [4]
- (ii) Name the distribution in which values fall mainly below the mean. [1]
- (b) Company Z wants to improve sales. Part of the sales data indicate that the mean sale was \$100 per month. After training of sales staff, recent sales data taken from a sample of 25 salesmen indicate an average sale of \$130 per month, with a standard deviation of \$15. At 5% significance level, test the claim that the average sales are more than \$100 per month.
- (i) State the null hypothesis (H_0). [1]
- (ii) Write the alternative hypothesis (H_1). [1]
- (iii) Using the formula $t = \frac{\bar{X} - \mu}{\frac{S}{\sqrt{n}}}$ test the hypothesis. [8]
- (iv) What are the implications of these findings for the company? [3]

- (c) A clustered/positive autocorrelation was obtained using Geary's scale below.



- (i) Draw a diagram which represents a positive autocorrelation as per the findings in the Geary's Scale above. [3]
- (ii) Explain the importance of the results in (c)(i) in the identification and control of diseases. [4]

SECTION C: RESEARCH TECHNIQUES

Answer one question from this section.

8 PHYSICAL COMPONENT

Table 1 shows changes in temperature with increase in altitude for a rising parcel of air and its surrounding.

Table 1

Altitude (km)	0	0.5	1.3	1.5	2	2.5
Temperature of a parcel of air (°C)	20	15	10	8.5	7	5
Temperature of the surrounding (°C)	20	10	5	0	-5	-7

- (a) (i) Use the data in Table 1 to draw temperature height graphs. [10]
 (ii) Describe the trend shown in Table 1. [3]
 (b) (i) Describe how you would measure evaporation rate. [5]
 (ii) Explain the importance of measuring evaporation rates to farmers. [7]

HUMAN COMPONENT

- 6 The data in Table 2 shows the quantity in thousands tonnes of wheat, barley and oats produced in Country X during the years 1991 to 1994.

Table 2

Years	Wheat	Barley	Oats
1991	30	18	27
1992	43	14	24
1993	43	16	27
1994	45	13	34

- (a) (i) Describe the steps taken to collect the data in Table 2. [6]
 (ii) Use the data in Table 2 to draw a compound bar chart. [10]
 (iii) Describe the trends in the production of wheat, barley and oats. [3]
 (b) State the advantages and disadvantages of using a compound bar chart. [6]

MITIGATION AND ADAPTATION

- 7 (a) Figure 7.1 below shows the formation and movement of cyclone Idai.

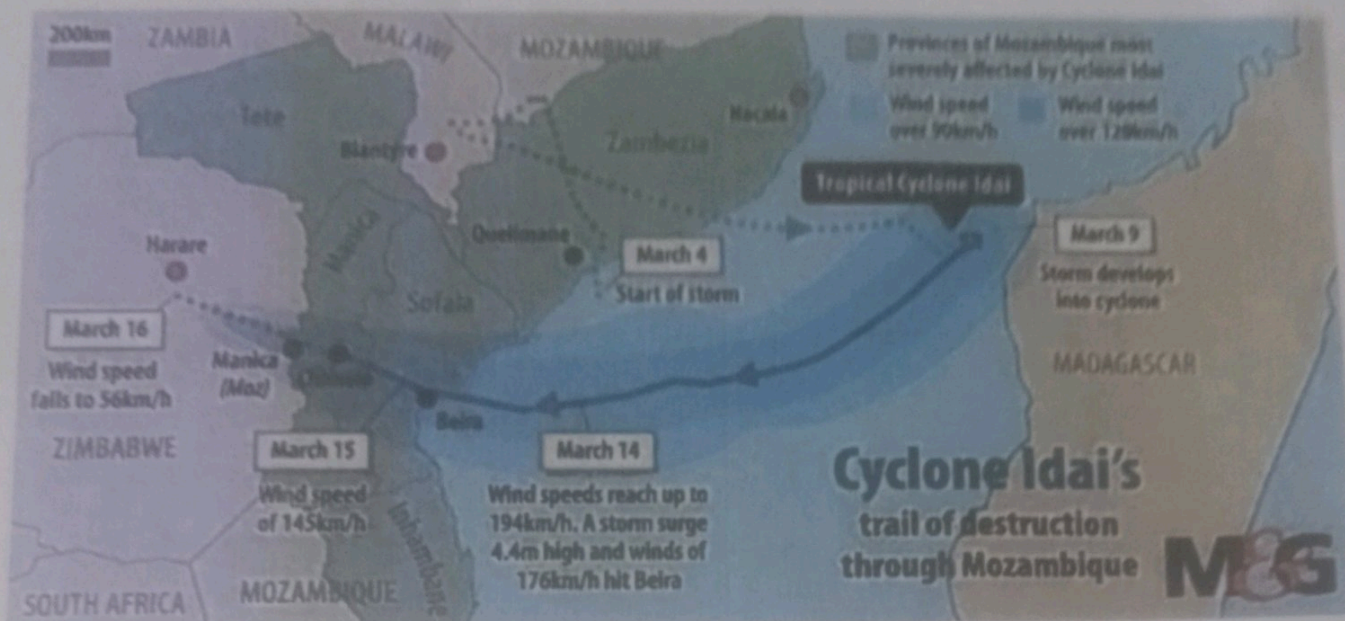


Fig. 7.1

- Describe the movement of cyclone Idai from 4 March to 16 March as shown on Fig. 7.1 above. [5]
- (b) Identify risks which the community may be exposed to while evacuating prior to and/or sheltering during a severe Tropical cyclone. [8]
- (c) Design an action plan of effective safety measures for the community against risks posed by Tropical cyclones. [8]
- (d) How can **one** use radar satellite images and maps for emergency response in times of cyclones. [4]