



EXAMINATIONS COUNCIL OF ESWATINI
Eswatini General Certificate of Secondary Education

CANDIDATE
NAME

CENTRE
NUMBER

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CANDIDATE
NUMBER

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GEOGRAPHY

6890/02

Paper 2 Geographical Skills

October/November 2020

2 hours

Additional Materials:

- Ruler
- Protractor
- Plain paper
- Calculator
- 1:50 000 survey map extract enclosed with this Question Paper

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces provided.
Write in dark blue or black pen.
You may use soft pencils for any diagrams, graphs, calculations, tables or rough working.

SECTION A

Answer **all** questions.

SECTION B

Answer **all** questions.

SECTION C

Answer **one** question.

The Insert contains Photograph A for Question 2 and Photographs B and C for Question 3.

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

For Examiner's Use	
Section A	
Question 1	
Section B	
Question 2	
Question 3	
Question 4	
Section C	
Either Question 5	
Or Question 6	
Total	

This document consists of **19** printed pages **1** blank page and **4** insert pages.

SECTION A – MAP READING SKILLS

- 1 The map extract is for Zimbabwe (Mbalabala). The scale is 1:50 000.

Fig. 1 shows the position of some features in the south western part of the map

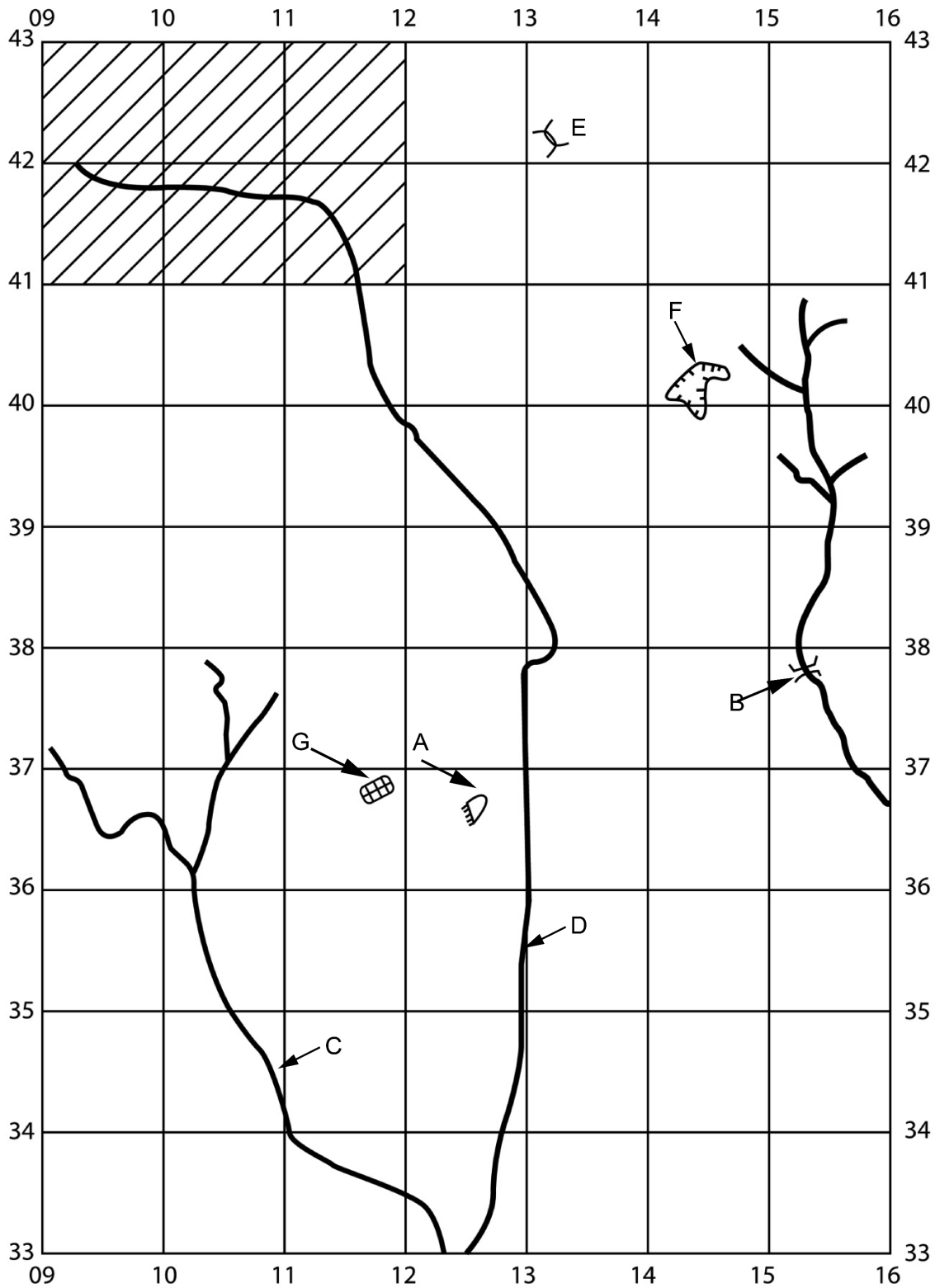


Fig. 1

(a) Using the map extract identify the following features shown in Fig. 1;

(i) feature A;
..... [1]

(ii) feature B;
..... [1]

(iii) river marked C;
..... [1]

(iv) class of road D;
..... [1]

(v) feature E;
..... [1]

(vi) land use at F;
..... [1]

(vii) land use at G;
..... [1]

(viii) settlement pattern in the shaded area.
..... [1]

(b) (i) What is the general direction of flow of the Umzingwani river (central part of the map extract) from eastings 14 to easting 21?
..... [1]

(ii) Name **two** natural features of the Umzingwani river that are found at grid square 1842?
1
2 [2]

(iii) What is the six figure grid reference of the confluence of the Incema and Umzingwani rivers? (western part of the map).
..... [1]

(iv) What type of drainage pattern is formed by the Umzingwani river and its tributaries south of northing 38?
..... [1]

(c) What is the grid bearing of Gcabayi trigonometrical station (2435) from Mbalani trigonometrical station (2243).
..... [1]

(d) (i) Measure the distance along the wide tarred road from its junction at 130378 to the point where it crosses the Umzingwani river. Give your answer in metres.
..... [1]

(ii) The height of the junction is 1100 metres and the river crossing is 1000 metres above sea-level. Calculate the gradient between the two points.
.....
.....
.....
.....
..... [2]

(e) What is the height of the Mbalani peak in square 2243?
..... [1]

(f) What economic activity is dominant in grid squares 1548 and 1549?
..... [1]

(g) (i) Identify any **two** social facilities found in the town of Mbalabala.
1
2 [2]

(ii) Using map evidence state **two** reasons for the development of Mbalabala town.
1
2 [2]

(iii) Calculate the area of Inyakuni dam. Give your answer in km².
.....
.....
.....
..... [2]

[Total: 25 marks]

SECTION B

Answer **all** Questions.

2 Study Photograph A (Insert), which shows a weather station.

(i) What is a *weather station*?

.....
..... [1]

(ii) Identify the instruments shown as A and B in Photograph A?

A
B [2]

(iii) State **three** features of the Stevenson screen shown in Photograph A.

1
2
3 [3]

(iv) State **three** favourable factors for the siting of the weather station shown in Photograph A.

1
2
3 [3]

[Total: 9 marks]

3 (a) Study Photographs B and C (Insert), which show two sources of energy.

(i) Identify energy source B?

..... [1]

(ii) State **two** advantages of using the energy source labelled B.

1

.....

2

..... [2]

(iii) Give **three** factors that influence the development of the energy source labelled C.

1

.....

2

.....

3

..... [3]

(b) Look at the energy source in photograph C Identify **two** features of the energy source shown in the Photograph.

1

.....

2

..... [2]

[Total: 8 marks]

- 4 (a) Study Fig. 2 which shows information about the world's population, who lived in urban slums between 1990 and 2010.

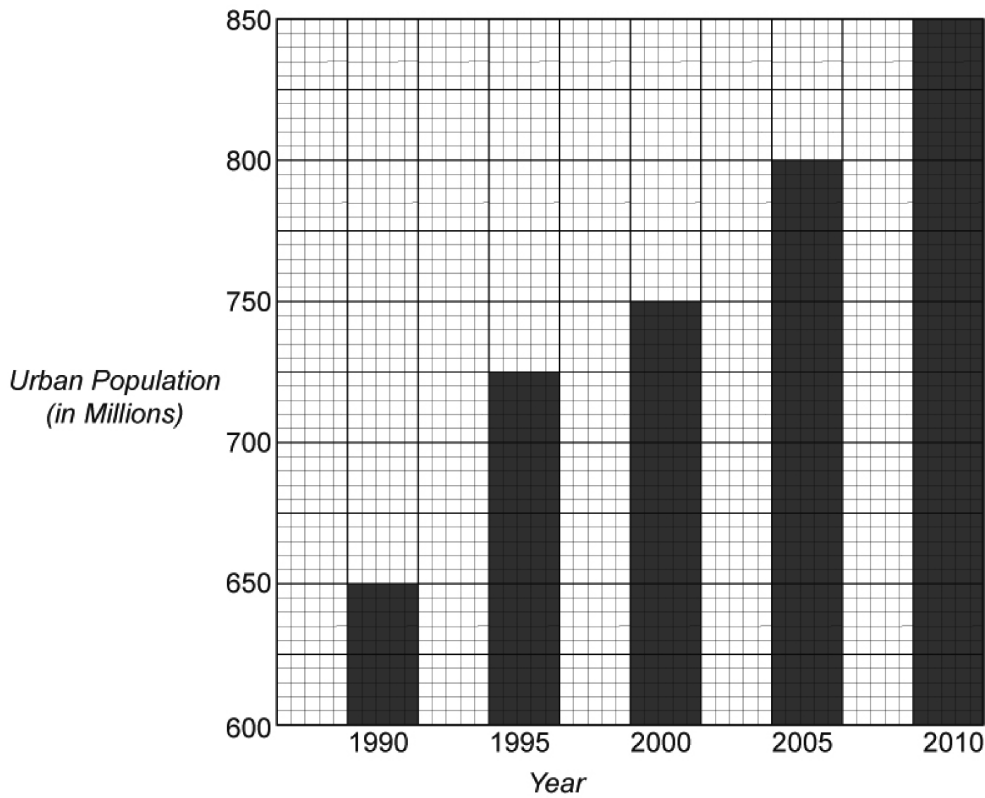


Fig. 2

- (i) What was the total number of people that lived in the urban slums in 1995?
 [1]
- (ii) Calculate the number of people who lived in urban slums from 1990 to 2010.

 [1]
- (iii) Suggest **three** reasons for the increase in the number of people who live in urban slums.
 1

 2

 3
 [3]

- (b) Study Table 1, which shows birth rates, death rates and rate of natural increase for three countries, Botswana, Lesotho and Eswatini.

	Botswana	Lesotho	Eswatini
Birth rate per 1000	C	42	48
Death rate per 1000	13	D	17
Natural increase per 1000	37	25	E

Table 1

Using Table 1, calculate and state the missing figures for the birth rate in Botswana(**C**), death rate in Lesotho(**D**) and natural increase in population in Eswatini(**E**).

C

D

E [3]

[Total: 8 marks]

SECTION C

Answer **either** Question 5 **or** Question 6.

- 5 A group of students investigated the CBD of a town. They studied the height, width and distance of the buildings. They also decided to investigate the value of land.

The students agreed on the following hypotheses;

Hypothesis 1; *“The height and width of buildings decreases with distance from the centre of the CBD”.*

Hypothesis 2; *“The value of land decreases with distance from the centre of the CBD”.*

- (a) To test Hypothesis 1 the students designed a recording sheet. State **two** pieces of information that will be shown by the students on the recording sheet besides the height, width and distance of the buildings.

1

.....

2

..... [2]

- (b) A pilot survey of the town was carried out by the teacher and two of the students.

State **two** advantages of a pilot survey.

1

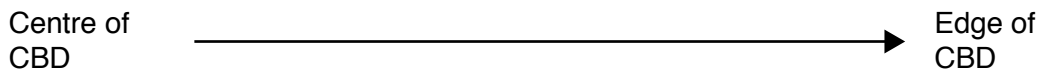
.....

2

..... [2]

- (c) Ten sites in the town were chosen and the buildings of each site were observed. The height of each building was observed by counting the number of storeys. The width was measured using the pacing method. The results are shown in Table 2.

Table 2



Site	A	B	C	D	E	F	G	H	I	J
Average height (storeys)	14	14	13	12	10	09	04	03	03	02
Average width (paces)	10	09	09	08	08	07	07	06	05	06

Use the information from Table 2 to draw a bar graph on Fig. 3 to show the average height of the buildings with distance from the centre of the CBD.

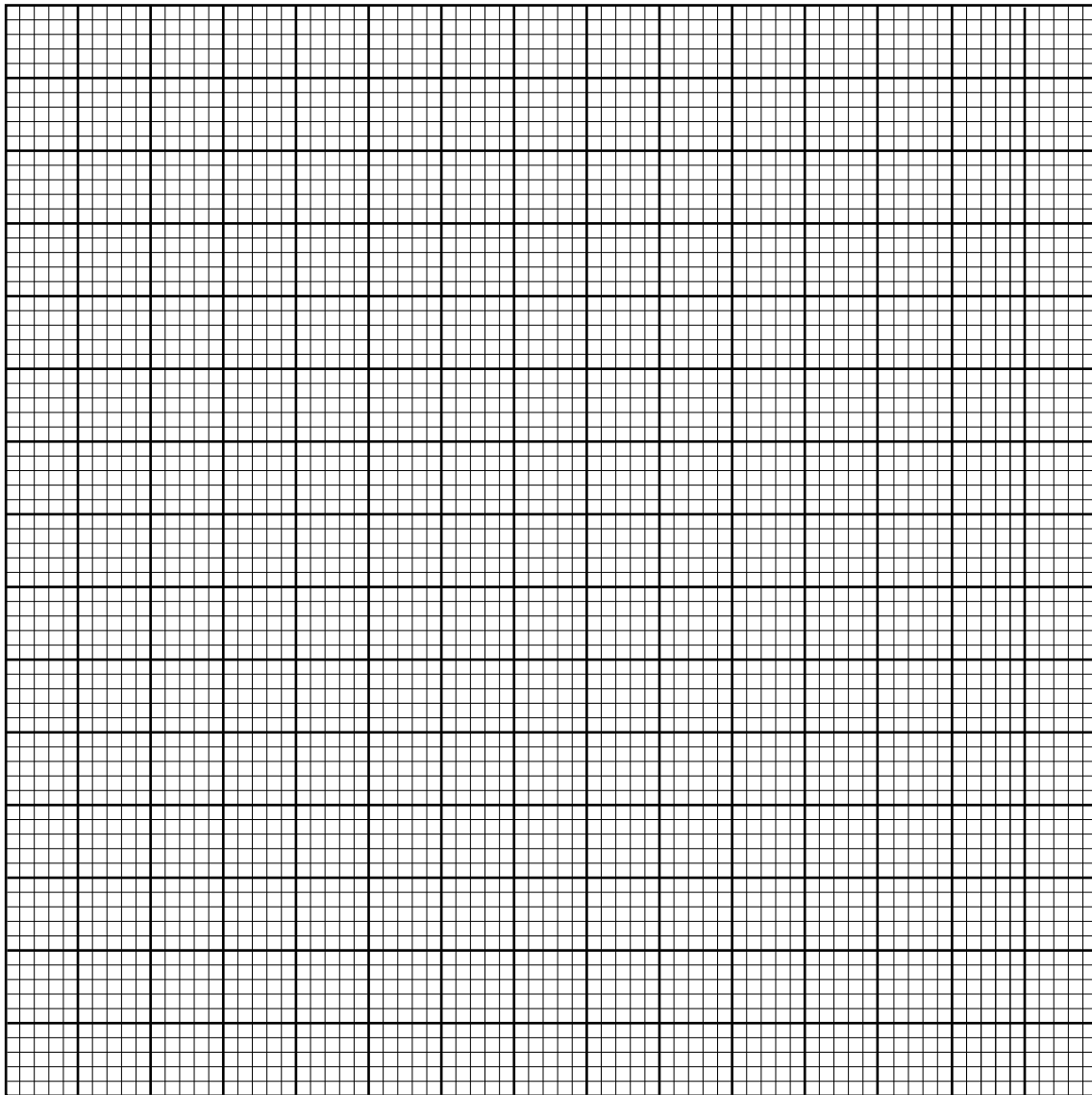


Fig. 3

[5]

(d) Write a conclusion to Hypothesis 1; *“The width and height of buildings decreases with distance from the centre of the CBD”*. Use evidence from Table 2 and Fig. 3.

.....

.....

.....

.....

.....

.....

.....

.....

[3]

- (e) The students further investigated Hypothesis 2; “The value of land decreases with distance from the centre of the CBD”

Land values were collected from the municipal council. The value of land is measured in thousand Emalangeni per square metre. The students then plotted the information on an isoline map shown in Fig. 4

- (i) On Fig. 4 draw an isoline for 60 thousand emalangeni per square metre. [1]
- (ii) On Fig. 4 shade in the land value between the isolines 30 and 40. [1]

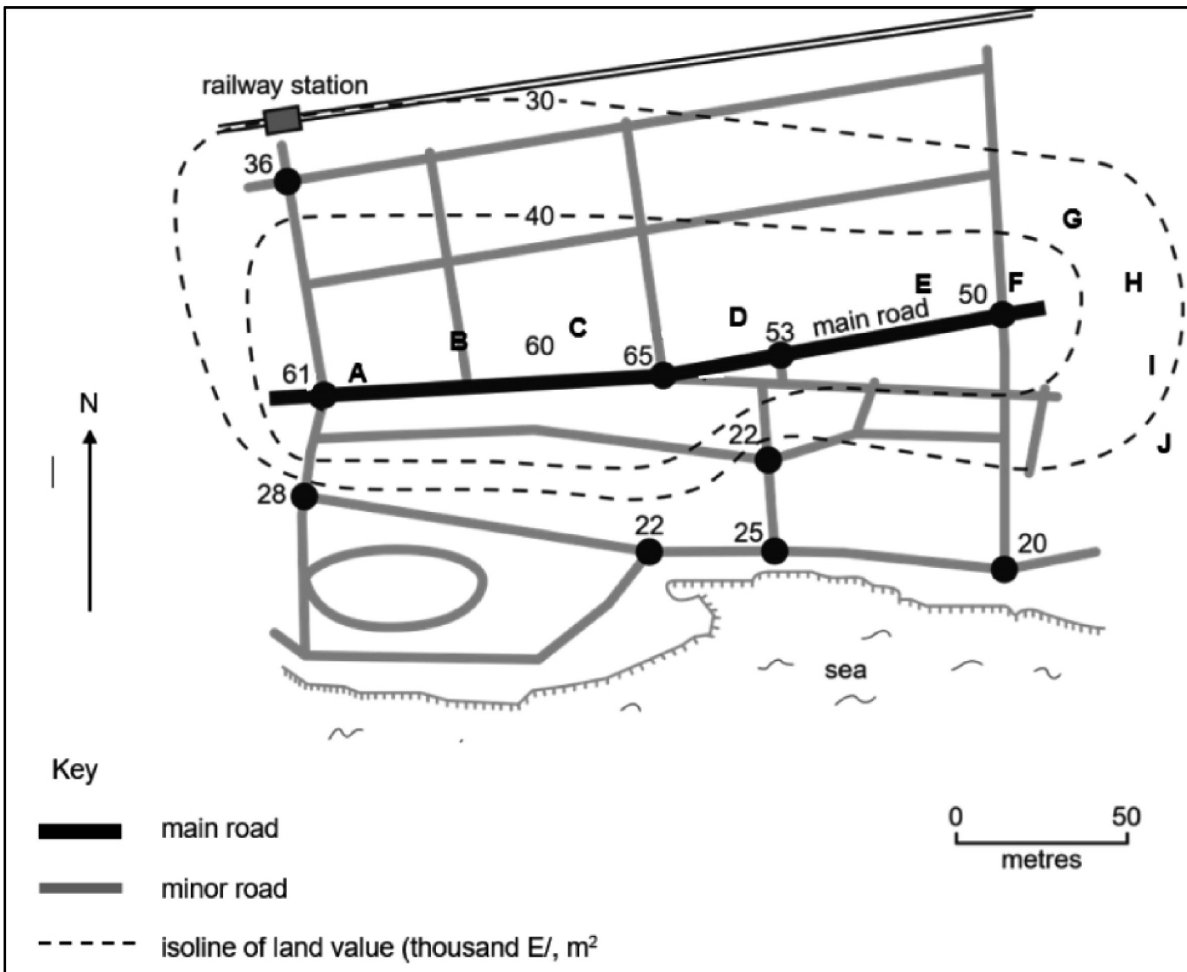


Fig. 4

(f) Write a conclusion to the Hypothesis; *“The value of land decreases away from the centre of the CBD”*. Use evidence from Fig. 4.

.....
.....
.....
.....
.....
..... [3]

(g) The students also decided to observe the function of the buildings in the CBD.

(i) At each site the ground floor function of the buildings was recorded. Why do you think the students recorded only the ground floor function of the buildings?

.....
..... [1]

(ii) Tick in the boxes below **three** functions which are found in the CBD of a town;

- | | |
|---|---|
| <input type="checkbox"/> Post office | <input type="checkbox"/> Squatter settlements |
| <input type="checkbox"/> High class residential | <input type="checkbox"/> Department stores |
| <input type="checkbox"/> Industry | <input type="checkbox"/> Police Station |

[3]

(h) Study Fig. 5, shows the main functions of the buildings found in the town in site A and site B.

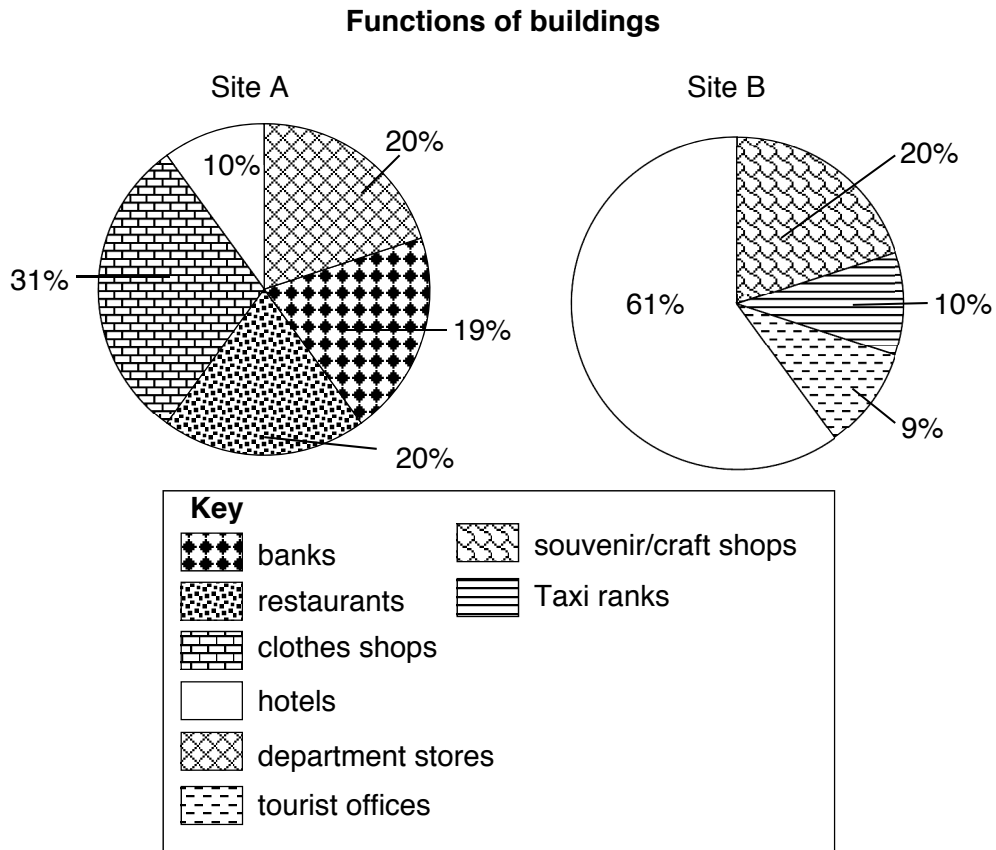


Fig. 5

(i) Using Fig. 5 what is the main function of the buildings in site A.

..... [1]

(ii) Using Fig. 5 compare the functions of sites A and B.

.....

 [3]

[Total: 25 marks]

- 6 (a) Students from a school in Eswatini investigated the effects of tourism in the town of Richards Bay, Kwazulu-Natal in South Africa. They investigated the effect on the environment and the economic benefits of tourism in the town. They investigated the following hypothesis;

Hypothesis 1: *Tourism has a negative impact on the environment of Richards Bay.*

Hypothesis 2: *Tourism has a positive economic benefit for the residents of Richards Bay.*

To carry out their fieldwork the students identified ten survey sites in the town, these are shown on Fig. 6. At each site the students wanted to estimate the importance of tourism.

They based their decision on whether shops in the area were used mainly by local people or tourists.

- (i) Suggest **three** ways the students could use to decide whether shops were mainly used by locals or tourists.

1

.....

2

.....

3

..... [3]

- (ii) Before starting their fieldwork, the students did a small pilot (trial) survey near their school.

Give **two** advantages of doing a pilot survey.

1

.....

2

..... [2]

(iii) The results of the students' fieldwork are shown in Table 3.

Use these results to complete the divided bar graph for site 5 on Fig. 6. [2]

Table 3
Result of fieldwork

	Pilot site	Survey sites									
		1	2	3	4	5	6	7	8	9	10
Number of shops used mainly by local people	8	7	7	10	8	6	2	5	7	2	1
Number of shops used mainly by tourist	3	1	2	8	8	9	12	10	11	10	12

Results of fieldwork

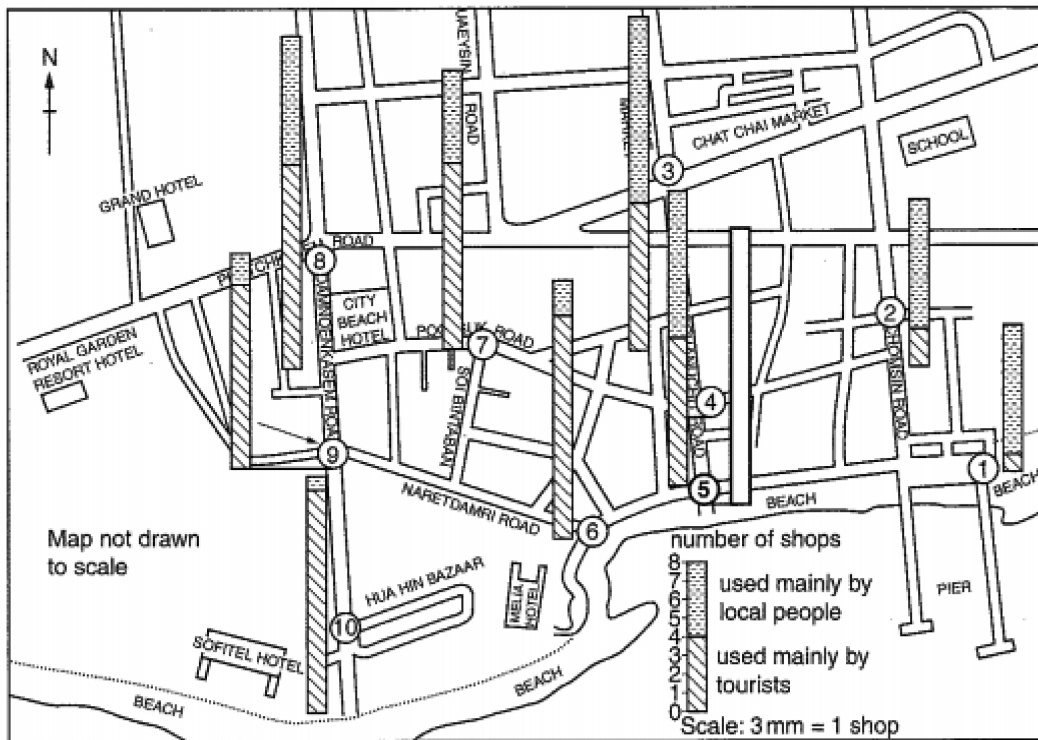


Fig. 6

(iv) The students then decided to rank the ten sites in order of importance for tourism. To do this they first calculated the percentage of shops used mainly by tourists at each site using the following formula;

$$\frac{\text{number of shops used mainly by tourists}}{\text{total number of shops (used by both locals and tourists)}} \times 100$$

The number of shops at the pilot site is shown in Table 3.

In the space below calculate the percentage of shops at the **pilot site** used mainly by tourists. Show your calculation.

Pilot site

[2]

(b) The result of the calculation for the ten actual survey sites are shown in Table 4 below.

Complete the order of the percentage of shops used mainly by tourists by inserting ranks 1 to 5.

Table 4

Percentage of shops used mainly by tourists

Survey site	1	2	3	4	5	6	7	8	9	10
Percentage of shops used mainly by tourists	12.5	22.2	44.4	50.0	60.0	85.7	66.7	61.1	83.3	92.3
Rank order	10	9	8	7	6					

[3]

(c) The students interviewed **any of** the twenty residents that they came across.

(i) What type of sampling technique did the students use?

..... [1]

(ii) Give **two** disadvantages of the sampling technique mentioned in (c) (i) above.

.....

 [2]

- (d) In conducting the interviews, the following were elements of the environment that were indicated by the residents to have adverse effects on the environment of Richards Bay town.

Table 5

Negative elements	Percentage of residents
Loss of sand dunes	80
Air pollution	75
Loss of natural vegetation	70
Littering	75
Development of infrastructure	70

Write a conclusion to the Hypothesis; “*Tourism has a negative impact on the environment of Richards Bay*”, reference should be made to Table 5.

.....

.....

.....

.....

.....

.....

.....

..... [3]

- (e) To get data for **Hypothesis 2: *Tourism has a positive economic benefit for the residents of Richards Bay***, the students used a questionnaire.

- (i) How would the students use a systematic sample technique with their questionnaire?

.....

..... [1]

- (ii) The results of Question 1 of the questionnaire obtained from 20 residents at **site 3** are shown in Table 6.

Q1 Overall do you think tourism has an economic benefit in Richards Bay?

Table 6

YES	15
NO	5

Plot these results from Table 6 on Fig. 7.

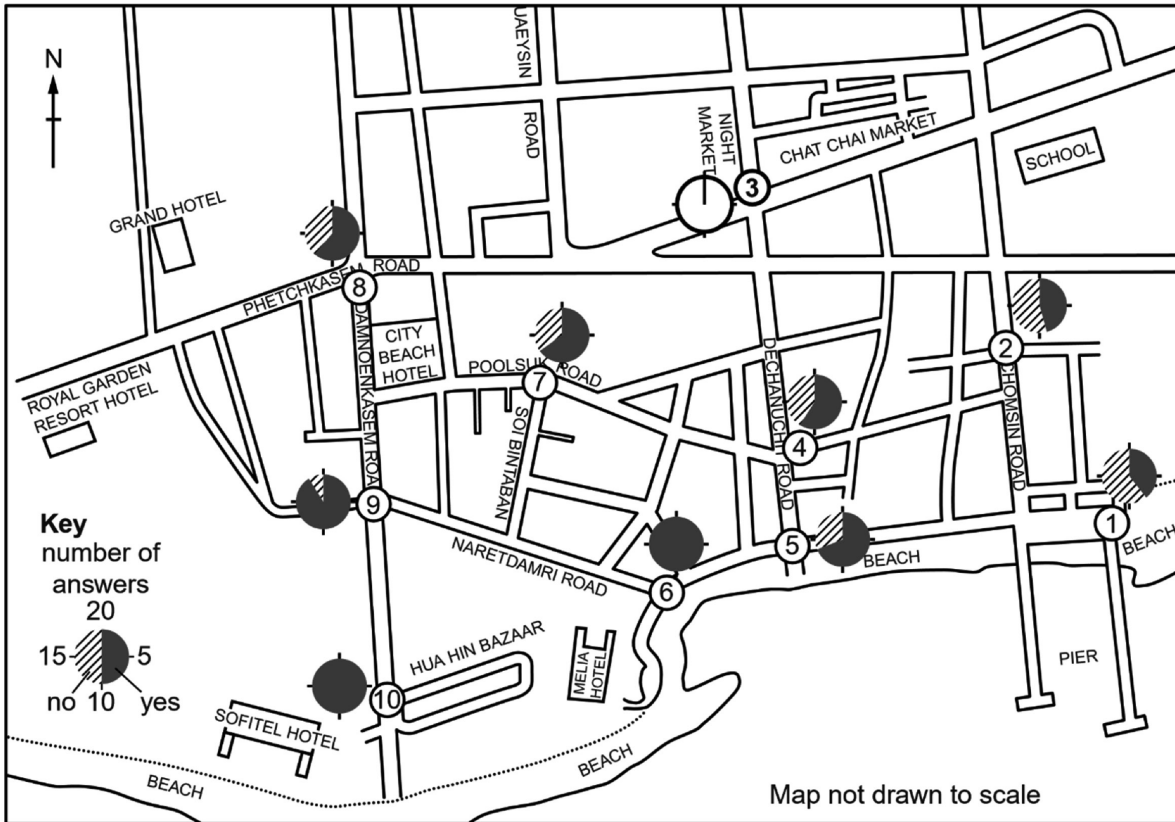


Fig. 7

(iii) The results of Question 2 obtained from 20 residents at site 3 are shown in Table 7.

Table 7

Q2 what do you think is the main benefit of tourism in Richards Bay

More job opportunities	6
Improved standard of living	5
Improved infrastructure	3
Greater range of goods in shops	3
More modern services	3

Using Table 7 plot the results for site 3 onto the tally chart Fig. 8 below.

Results of survey

Site	More job opportunities	Improved standard of living	Improved infrastructure	Greater range of goods in shops	More modern services
1	////	///	///	////	###
2	///	////		###	###
3					
4	###			////	
5	### ////	////			///
6	### ##	###			
7	### ////	////		///	
8	### ##	###			
9	### ## ///	////			
10	### ## ##	////			

Fig. 8 [2]

(iv) What conclusion can you draw about Hypothesis 2: *Tourism has a positive economic benefit for the residents of Richards Bay?* Support your answer with evidence from Fig. 7 and Fig. 8.

.....

.....

.....

.....

.....

.....

..... [3]

[Total: 25 marks]

