



NATIONAL SENIOR CERTIFICATE EXAMINATION
SUPPLEMENTARY EXAMINATION – MARCH 2017

GEOGRAPHY: PAPER II

EXAMINATION NUMBER

| | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|
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Time: 1½ hours

100 marks

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. Write your examination number in the appropriate blocks provided above.
2. This question paper consists of 16 pages, a topographic map and an aerial photograph. Please check that your paper is complete.
3. Read the questions carefully.
4. Answer ALL the questions in the spaces provided on the question paper.
5. Carefully study the 1:50 000 topographic map extract 2732AC JOZINI and the accompanying 1:10 000 aerial photograph 2732 JOZINI before answering the questions.
6. The topographic map has grid lines with markings A to G and 1 to 15 that may be used to identify locations according to blocks.
7. The topographic map extract, aerial photograph and your completed question paper must be handed to the invigilator at the end of the examination. The maps and aerial photographs may be retained by the school for future use.
8. On page 2 there is a glossary of words. This will help you understand what the words in **bold** in the questions are asking you to do. There is also an English-Afrikaans translation of some words appearing on the map.
9. A magnifying glass and calculator may be used.
10. It is in your own interest to write legibly and to present your work neatly.

| | | | | | |
|----------|----|----|----|----|-------|
| Question | 1 | 2 | 3 | 4 | Total |
| Marks | 24 | 16 | 41 | 19 | 100 |
| Obtained | | | | | |

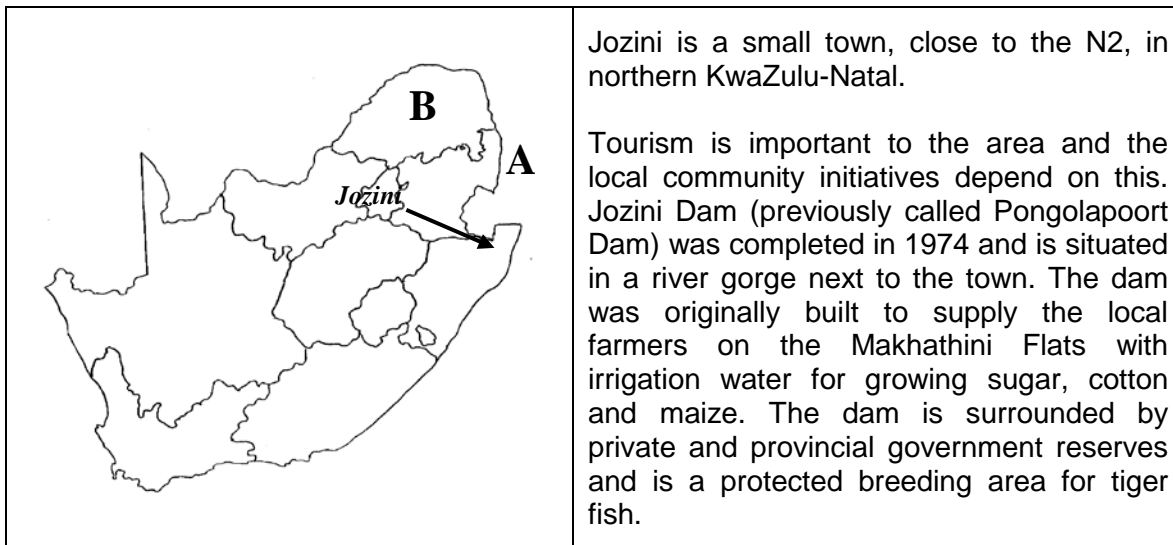
Glossary of terms

| WORD | MEANING |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Account for | To justify, and provide reasons for something using a short explanation |
| Calculate | To work out the value of something using a mathematical method |
| Classify | To arrange in categories or groups according to shared qualities |
| Compare | To point out or show both similarities and differences |
| Complete | To fill in |
| Describe | To briefly give an account of something; to explain something and give reasons (Note a map or diagram may be part of a description.) |
| Draw | To create a picture with lines |
| Estimate | To make an approximate calculation or judgement of something |
| Explain | To describe something so that it can be understood |
| Identify | To give the details or characteristics of something |
| Indicate | To show or mark the position of something |
| Label | To make a diagram or sketch with information |
| Name | To state something; to give; to mention; to identify |
| Outline | To give the essential features or main aspects |
| Provide | To give |
| Suggest | To put forward ideas, a plan or reasons |
| Verify | To prove that something is true |

Translation of words

English to Afrikaans

| | |
|-------------------------|----------------|
| Bridge | Brug |
| Canal | Kanaal/ voor |
| Cutlines | Snylyn/ kaplyn |
| Dam | Dam |
| Experimental farm | Proefplaas |
| Furrow | Kanaal/ voor |
| Game Reserve | Wildreservaat |
| Golf course | Gholfbaan |
| Hill | Kop/ koppie |
| Hospital | Hospitaal |
| Marsh, swamp or wetland | Vlei |
| Memorial | Gedenkteken |
| River | Rivier |
| Road | Pad |
| Route | Roete |
| Sewage works | Rioolwerke |
| Stream | Spruit |
| Water gap | Poort |
| Waterworks | Waterwerke |
| Weir | Keerwal |

LOCATION MAP: LOCATION OF JOZINI IN SOUTH AFRICA

[Source: <www.jozini.org.za>]

QUESTION 1 ATLAS USE, MAP ORIENTATION AND TECHNIQUES

1.1 Refer to the location map above, as well as the 1:50 000 topographic map extract 2732AC JOZINI, to answer the following questions. Tick the correct box.

1.1.1 The neighbouring country labelled A on the location map above is ...

| | |
|------------|--|
| Swaziland | |
| Lesotho | |
| Mozambique | |
| Zimbabwe | |

(1)

1.1.2 The province labelled B on the location map above is ...

| | |
|------------|--|
| Limpopo | |
| Mpumalanga | |
| Gauteng | |
| Free State | |

(1)

- 1.1.3 (a) The approximate true bearing of trigonometrical station 41 (Mpondwane) in C1 from spot height 418 (E1) is ...

| | |
|------|--|
| 7° | |
| 173° | |
| 187° | |
| 353° | |

(2)

- (b) (i) Is trigonometrical station 41 (Mpondwane) in C1 intervisible from spot height 418 (E1)? Tick the correct option.

| | |
|-----|----|
| YES | NO |
| | |

(1)

- (ii) **Provide ONE** reason for your answer.

(2)

- 1.1.4 The magnetic declination for the topographic map sheet 2732AC JOZINI will be ... in 2017. Tick the correct answer.

| | |
|-------------------------|--|
| 2° 45' W of True North | |
| 17° 29' W of True North | |
| 20° 14' W of True North | |
| 22° 59' W of True North | |

(2)

Calculations

1.1.5 The length of the Pongolapoort Dam wall (C5) is ... m.

| | |
|-------|--|
| 0,1 m | |
| 0,5 m | |
| 100 m | |
| 500 m | |

(2)

1.1.6 The map code of the topographic map sheet to the south east of 2732AC JOZINI is ...

| | |
|--------|--|
| 2732AB | |
| 2732AD | |
| 2732CB | |
| 2732DA | |

(2)

1.1.7 A number of fluvial features/ structures (A to C) have been labelled on the 1:50 000 topographic map extract 2732AC JOZINI. **Identify** each labelled feature/ structure by circling the correct underlined word(s).

- A (Block F14) constructed dam/ non-perennial water body/ perennial water body
- B (Block A10) rapids/ stream braiding/ sand dunes
- C (Block C5) reservoir/ communications tower/ water tower

(3)

1.2 Relief and gradient

Refer to the 1:50 000 topographic map extract 2732AC JOZINI.

1.2.1 **Calculate** the average gradient from trigonometrical station 12 (G1) to point D (G1).

(a) Difference in height: _____ m (1)

(b) Distance between the two points: _____ m (1)

(c) Gradient: **1:** _____ (2)

Calculations

(d) **Verify** how the answer to Question 1.2.1(c) indicates an accurate description of a gorge/ steep slope.

 _____ (2)

1.2.2 **Explain** the importance of cutlines visible in F1 and G1.

 _____ (2)
[24]

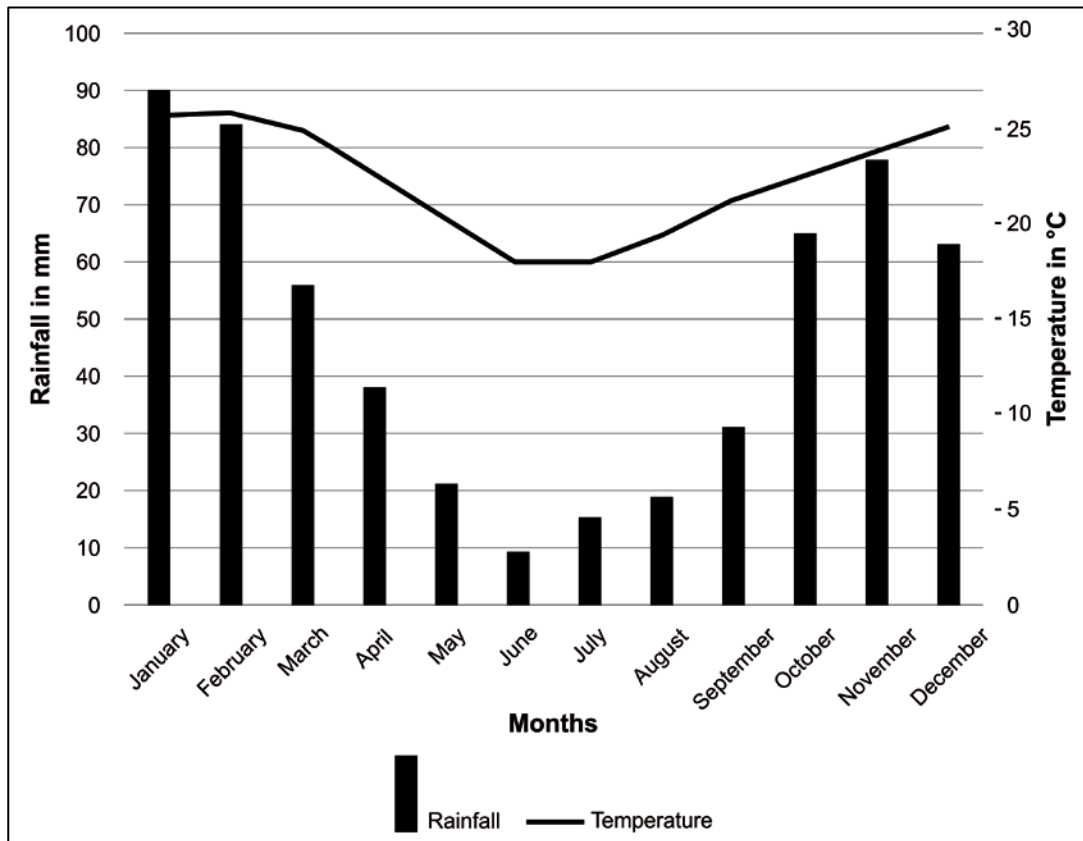
Q1 subtotal

QUESTION 2 CLIMATE AND DRAINAGE ANALYSIS

Study the topographic map extract 2732AC JOZINI.

2.1 Study Figure 1, a climate graph for Jozini.

Figure 1: Climate graph – Jozini



2.1.1 **Calculate** the total annual rainfall for Jozini.

_____ mm (2)

2.1.2 **Identify** the warmest month in Jozini and **estimate** the temperature for that month.

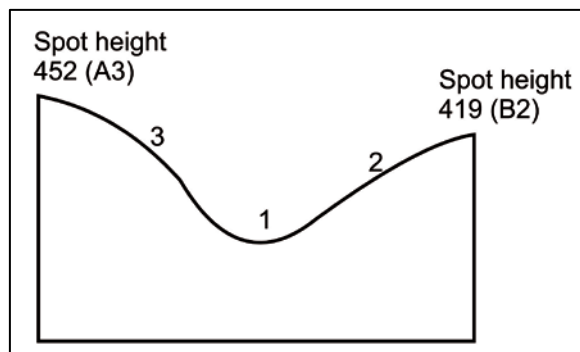
Month: _____ Temperature: _____ °C (3)

2.1.3 **Calculate** the range in the average annual temperature for Jozini.

_____ °C (2)

- 2.2 Study Figure 2 below, which shows a sketch cross section from spot height 452 (A3) to spot height 419 (B2). Three sites have been numbered on the cross section. Note that the cross-section is not drawn to scale.

Figure 2: Sketch cross section



Grade 12 students doing fieldwork recorded the following temperatures at midday at selected sample sites (numbered 1 to 3) on Figure 2.

| | | |
|--------------|--------------|--------------|
| 18 °C | 24 °C | 32 °C |
|--------------|--------------|--------------|

- 2.2.1 **Complete** the table by writing the correct temperature below each site.

| SITE | Site 1 | Site 2 | Site 3 |
|-------------|--------|--------|--------|
| TEMPERATURE | | | |

(3)

- 2.2.2 **Indicate** the north-facing slope on the sketch cross section (Figure 2) above.

(2)

- 2.2.3 **Provide** ONE piece of map evidence to justify your answer in Question 2.2.2.

(2)

- 2.3 The predominant drainage pattern in G1 is ... Tick the correct answer.

| | |
|-------------|--|
| dendritic | |
| parallel | |
| radial | |
| rectangular | |

(2)

[16]

| |
|--------------------|
| Q2 subtotal |
|--------------------|

QUESTION 3 PHOTOGRAPH ANALYSIS, RURAL AND URBAN SETTLEMENTS

Refer to the 1:50 000 topographic map extract 2732AC JOZINI and the accompanying 1:10 000 aerial photograph.

- 3.1 3.1.1 FOUR constructed features (E to H) have been labelled on the accompanying 1:10 000 aerial photograph. **Identify** these features.

E _____

F _____

G _____

H _____ (4)

- 3.1.2 **Name** the river labelled I on the aerial photograph.

_____ (2)

- 3.2 Refer to the 1:50 000 topographic map extract 2732AC JOZINI and the accompanying 1:10 000 aerial photograph.

- 3.2.1 **Describe** TWO site factors that led to the development of the town Jozini.

• _____

• _____

_____ (4)

- 3.2.2 (a) **Compare** the street patterns of the town of Jozini (C4) and Makhonyeni (D8).

Jozini: _____

Makhonyeni: _____

_____ (4)

- (b) **Account for** the differences in the street patterns of Jozini and Makhonyeni.

_____ (2)

- 3.2.3 Study Photographs 1 and 2 below. These show a typical Saturday morning in the business area of Jozini. Refer also to the 1:10 000 aerial photograph.

Photograph 1



Photograph 2



[Source: J Hosking, 2016]

- (a) **Provide** ONE reason for the location for the business centre of Jozini.

(2)

- (b) (i) **Classify** the settlement of Jozini as a high-order or low-order service centre. Tick the correct answer.

| High-order service centre | Low-order service centre |
|---------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |

(1)

- (ii) **Verify** your classification by using evidence from Photographs 1 and 2, the topographic map extract 2732AC JOZINI and the 1:10 000 aerial photograph.

(2)

- 3.3 Refer to the 1:50 000 topographic map extract 2732AC JOZINI.

- 3.3.1 Locate the experimental farm in blocks A 11–12 and B 11–12.

- (a) **Classify** the main type of economic activity taking place at the experimental farm.

(1)

- (b) **Explain** the purpose of an experimental farm.

(2)

- 3.3.2 Refer to the farming activities that are taking place in A6–7, B6–7 and B9–10, C9–10.

Compare the farming patterns evident in the two areas by **completing** the table below.

| Criteria | Farming area in blocks A6–7, B6–7 | Farming area in blocks B9–10, C9–10 |
|-------------------------------|----------------------------------------------|------------------------------------------------|
| Scale of farming | | |
| Size of the land units | | |
| Economic value of the farming | | |
| Water resources available | | |

(8)

- 3.4 Locate the Jozini Tiger Lodge in C4 on the topographic map extract 2732AC JOZINI. Refer to Photograph 3, the Fact File, and the 1:10 000 aerial photograph 2732 JOZINI.

FACT FILE

Jozini Tiger lodge is situated along the banks of the Jozini (Pongolapoort) Dam, in the heart of northern KwaZulu-Natal. The dam and Pongola Game Reserve is surrounded by World Heritage Sites as well as some of the most acclaimed nature reserves in the world, all of which are about a 1-hour drive away: for example, Sodwana Bay, Imfolozi, Mkhuze and Ndumo Game Reserves. The Tiger fishing tournament in October draws anglers from around the world. Jozini Dam is the most southern lake where tiger fish are endemic. These tiger fish are declining in most rivers due to pollution, water extraction and obstructions like weirs and dams that prevent their passage up or downstream to suitable spawning sites along flooded river banks and lake shores.

Photograph 3: Jozini Tiger Lodge



[Source: <www.jozini.org.za>]

- 3.4.1 **Provide** TWO reasons for the location of the Jozini Tiger Lodge.

- _____

- _____

(4)

- 3.4.2 The topographic map extract suggests that the Jozini Tiger Lodge is a hospital. **Explain** why errors such as this could occur when compiling a map.

(2)

- 3.4.3 **Suggest** THREE recreational activities tourists could participate in when staying at the Jozini Tiger Lodge.

- ---
- ---
- ---

(3)
[41]

| |
|--------------------|
| Q3 subtotal |
|--------------------|

QUESTION 4 RURAL SETTLEMENT ISSUES: SOCIAL JUSTICE – LAND REFORM

- 4.1 Refer to the topographic map extract 2732AC JOZINI. Focus on the blocked area A9–12, B9–12, C9–12 and D9–12. This area is marked by means of a red box on the topographic map extract 2732AC JOZINI.

Complete the land-use map of the area marked in the blocks in Figure 3 (page 15) by **labelling** and/ or sketching in the following features:

4.1.1 **Label:**

- The Phongolo River
- Balamhlanga seasonal pan
- D9 Rd (road)
- Experimental farm

(4)

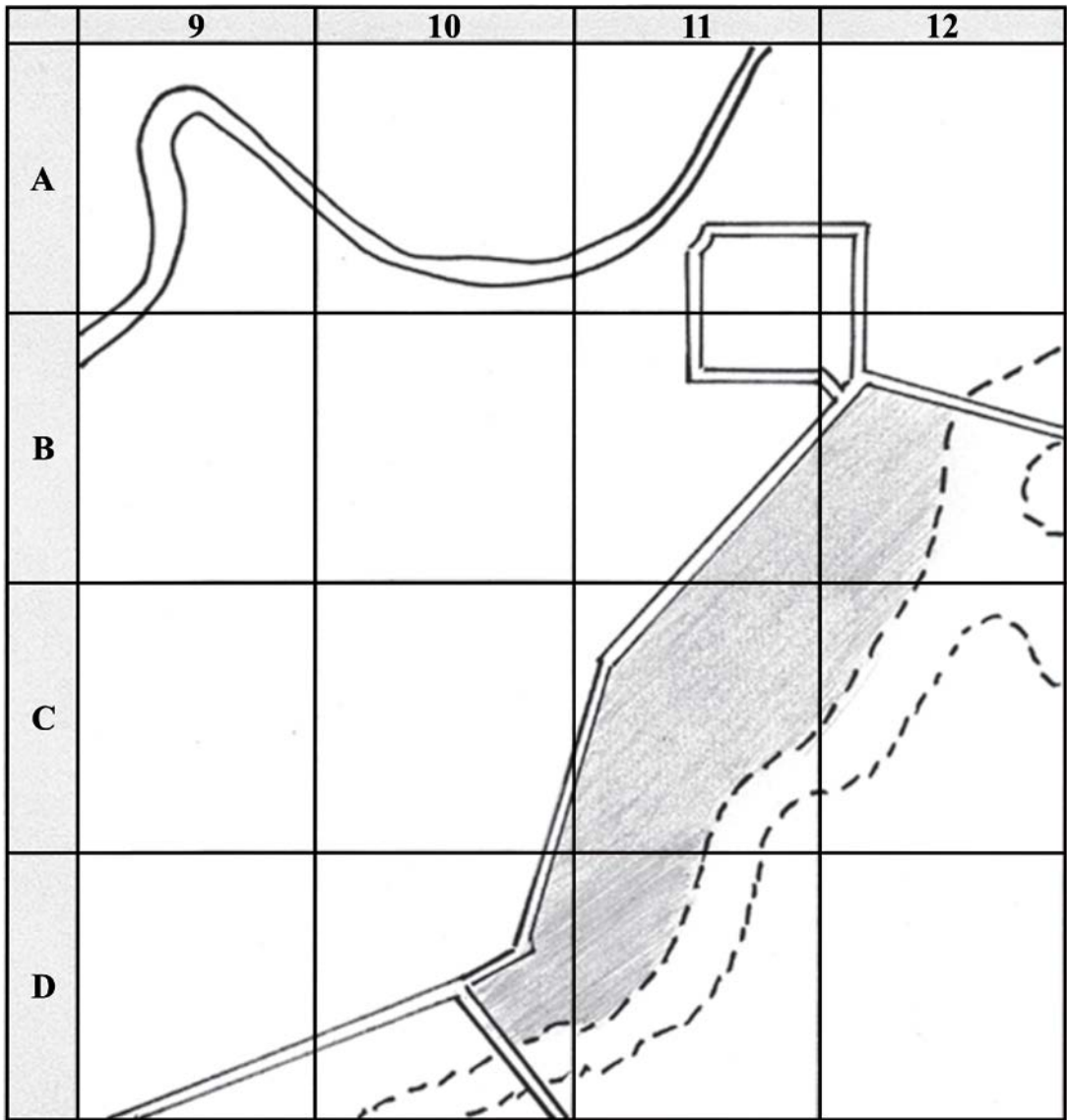
4.1.2 Fill in/ sketch and **label** the following:

- The canal system in the area
- All human constructed water features



(4)

You should compile a key on Figure 3 to assist with the labelling.

Figure 3: Land-use map (Question 4.1.1 and 4.1.2)



Key:

| Symbol | Description |
|-------------------------------------------------------------------------------------|--------------------------------------|
|  | Dirt road |
|  | Land-claim area awarded to claimants |
| | Buffer zone |
| | |
| | |
| | |

- 4.2 An area of land close to the Balamhlanga pan had been subject to a land claim and this land has been awarded to five claimants. The area has been shaded in on Figure 3 (page 15).

As a member of the Makhathini Landowners Trust, you have been asked to carry out a survey to assist with the subdivision of the land to ensure effective land use and farming practice takes place.

- 4.2.1 **Draw** in a 0,5 cm buffer zone surrounding the Balamhlanga seasonal pan on Figure 3. (2)

- 4.2.2 **Suggest** the importance of putting in a buffer zone around the Balamhlanga seasonal pan, before dividing the land between the claimants.

_____ (2)

- 4.2.3 **Outline** how you would fairly divide the area that has been awarded to the land claimants. There are five families who have been awarded an equal portion of the land.

_____ (4)

- 4.2.4 **Complete** the table below which reflects the attribute information that applies to one newly sub-divided farm.

Attribute information:

| | |
|----------------------------|--|
| Size of the farm | |
| Access to water | |
| Access to transport routes | |

(3)
[19]

Q4 subtotal

Total: 100 marks