Province of the
EASTERN CAPE
EDUCATION

NAME:

SURNAME:

**NATIONAL
SENIOR CERTIFICATE**

GRADE 10

NOVEMBER 2018

GEOGRAPHY P2

MARKS: 75

TIME: 1½ hours

		MARKS	HOD	CLUSTER	PROVINCIAL
Q1	15				
Q2	20				
Q3	24				
Q4	16				

TOTAL MARKS	MOD.
75	75

This question paper consists of 13 pages, including 1 page for rough work and calculations.

RESOURCE MATERIAL

1. An extract from the topographical map 3126 DD QUEENSTOWN.

2. Orthophoto map 3126DD 13 QUEENSTOWN

3. **NOTE:** The resource material must be collected by the schools for their own use.

INSTRUCTIONS AND INFORMATION

1. Write your NAME in the space provided on the cover page.

2. Answer ALL the questions in the spaces provided in this question paper.

3. You are provided with a 1 : 50 000 topographic map (3126 BB QUEENSTOWN) and an orthophoto map (3126 DD 13 QUEENSTOWN) of a part of the mapped area.

4. You must hand in the topographic map and the orthophoto map to the invigilator at the end of this examination session.

5. You must use the blank page at the back of this paper for all rough work. DO NOT detach this page from the question paper.

6. Show ALL calculations and formulae, where applicable. Marks will be awarded for these.

7. Indicate the unit of measurement in the final answer of calculations. Ensure that units are maintained throughout ALL your calculations and final answer.

8. You may use a non-programmable calculator.

9. The area demarcated in RED on the topographic map represents the area covered by the orthophoto map.

10. A glossary of some of the English and Afrikaans words and their translations appears below.

ENGLISH	AFRIKAANS
Landing strip	Vliegveld
Furrow	Voor
Caravan Park	Karavaanpark
Canal	Kanaal
Sewerage works	Rioolwerke
Golf Course	Gholfbaan
Excavation	Uitgrawing
Nature reserve	Natuurreservaat
Rifle Range	Skietbaan
Aerodrome	Vliegveld
Ravine	Kloof

GENERAL INFORMATION ON QUEENSTOWN

Queenstown, now **Komani**[2], is a town in the middle of the <u>Eastern Cape Province</u> of <u>South Africa</u>, roughly halfway between the smaller towns of <u>Cathcart</u> and <u>Sterkstroom</u>. It is currently the commercial, administrative and educational centre of the surrounding farming <u>district</u>.

Its former nickname, "Rose Capital of South Africa", comes from the large gardens and open places for flowers, (especially roses), in and around the town.

Coordinates: 31° 54′ 0″ S, 26° 53′ 0″ E

[Source: https://www.google.co.za/images]

       Please turn over

QUESTION 1: MULTIPLE-CHOICE QUESTIONS

The questions below are based on the 1 : 50 000 topographic map 3126DD QUEENSTOWN, as well as the orthophoto map of a part of the mapped area. Various options are provided as possible answers to the following questions. Choose the answer and write only the letter (A–D) in the block next to each question (1.1–1.15).

1.1   The map code of the topographic map of Queenstown indicates that the town lies on the ...

       A   31º E longitude and 26º N latitude.
       B   31º E longitude and 26º S latitude.
       C   31º S latitude and 26º E longitude.
       D   31º N latitude and 26º E longitude.

1.2   The contour interval of the orthophoto map is …

       A   20 m.
       B   10 m.
       C   15 m.
       D   5 m.

1.3   The map scales that are evident on the topographic map is a … scale.

       A   ratio and a word
       B   ratio and a fraction
       C   line and ratio
       D   line and word

1.4   The index number of the map sheet northwest of Queenstown is …

       A   3126 DD.
       B   3126 DD.
       C   3125 CC.
       D   3126 DA.

1.5   Queenstown is in the … province.

       A   Eastern Cape
       B   Western Cape
       C   KwaZulu-Natal
       D   North West

1.6   The scale of the orthophoto map is ... than that of the topographic map.

       A   5 times larger
       B   5 times smaller
       C   10 times larger
       D   10 times smaller

1.7 The landform that is found at **K** in block **I5** on the topographic map is a …

    A   spur.
    B   valley.
    C   cliff.
    D   flat-topped mountain.

1.8 The feature marked **R** on the topographic map is a …

    A   rift valley.
    B   gorge.
    C   mountain pass.
    D   gap.

1.9 The grid reference / co-ordinates of trigonometrical station 184 in block **H1** is …

    A   31º57'40" S / 26º48'40" E.
    B   31º58'40" E / 26º48'16" S.
    C   31º59'30" S / 25º48'44" E.
    D   34º02'40" E / 24º48'16" S.

1.10 The altitude shown by the trigonometrical station in block **E7** is …

    A   1 100 m.
    B   199,0 m.
    C   1 121,7 m.
    D   349 m.

1.11 The type of river marked **L** in Block **H9** is a …

    A   perennial river.
    B   non-perennial river.
    C   dry water course.
    D   dry pan.

1.12 Which route would a motorist use to travel to Whittlesea from Queenstown?

    A   National road
    B   Arterial road
    C   Secondary road
    D   Other road

1.13   The height of the road shown on the topographic map in block **F9** is
       1 169,2 metres which is indicated by a … on the map.

       A   spot height
       B   trigonometrical station
       C   contour line
       D   bench mark

1.14   Refer to block **G10** on the topographic map. To travel to East London from
       Queenstown, a motorist would take a(n) … direction.

       A   easterly
       B   southerly
       C   south easterly
       D   south westerly

1.15   How many kilometres would a motorist travel from block **J1** on the topographic
       map to Whittlesea?

       A   48 km
       B   26 km
       C   32 km
       D   20 km

                                                                    (15 x 1)   **[15]**

SECTION B: MAPWORK CALCULATIONS AND TECHNIQUES

QUESTION 2

2.1   Draw a line scale for this word scale:
        1 cm represents 10 km (Your line scale should show 100 km.)

                                                                    (2 x 1)   (2)

2.2   Calculate the demarcated straight line distance in kilometres between number
        7 and number **8** on the orthophoto map.

        _____

        _____

        _____

        _____
                                                                    (4 x 1)   (4)

2.3   Name the features at each of the following co-ordinates:

        (a)   31°53'00" S 26⁰ 51'30" E:

                 _____

        (b)   31°55'10" S 26⁰ 56'10" E:

                 _____
                                                                    (2 x 1)   (2)

2.4   Determine the true bearing from spot height 1496 to spot height 1414 in block
        A5.

        True bearing =   _____
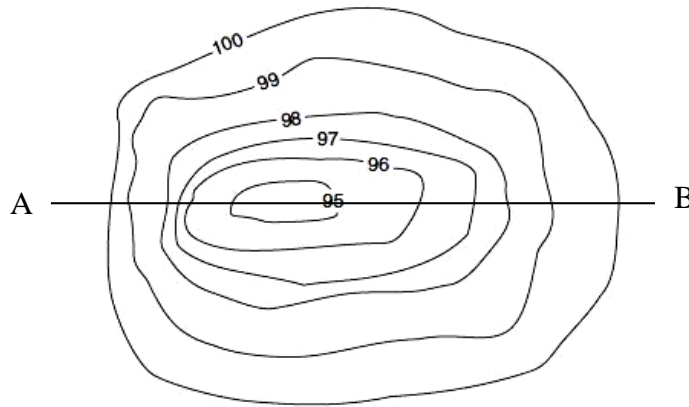   (2 x 1)   (2)

2.5   Use the information in QUESTION 2.4 above. Calculate the magnetic bearing
        for 2018.
        The present magnetic declination is 27°12'.

        Magnetic bearing =   _____

                              _____

                              _____
                                                                    (5 x 1)   (5)

2.6 Draw a simple cross section from **A** to **B** on the landform below. Use a vertical scale of 1 cm = 1 m.

(3 x 1) (3)

2.7 Name the landform that is depicted by the cross section in QUESTION 2.6.

(1 x 2) (2)
[20]

QUESTION 3: MAP AND PHOTO APPLICATION AND INTERPRETATION

3.1   Provide TWO pieces of evidence from the map to prove that agriculture takes place in block **G1**.

_____

(2 x 1)   (2)

3.2   Identify the following on the map:

3.2.1   Recreational place in block **D6/E6.**

_____

3.2.2   Tourist attraction site in block **C3**.

_____

(2 x 1)   (2)

3.3   Refer to slope no. **2** on the orthophoto map:

3.3.1   Identify the slope of the land marked by no. **2** on the orthophoto map.

_____

(1 x 1)   (1)

3.3.2   Suggest a reason for your answer in QUESTION 3.3.1.

_____

(1 x 2)   (2)

3.4   Write down the height of the contour line marked **5** on the orthophoto.

_____

(1 x 1)   (1)

3.5   Refer to the Ngcobo River in block **J9**.

3.5.1   In which direction does the Ngcobo River flow?

_____

(1 x 1)   (1)

3.5.2   Suggest ONE reason to support your answer in QUESTION 3.5.1.

_____

_____

(1 x 2)   (2)

Please turn over

3.6 Refer to block **H1** on the topographic map. Name FOUR sources/methods that farmers use to obtain water to irrigate their fields.

(4 x 1) (4)

3.7 Orthophotomap.

3.7.1 Choose the correct answer between brackets:

The orthophoto map is derived from a (high oblique/vertical aerial) photograph.

(1 x 1) (1)

3.7.2 What evidence is there on the map to support your answer in QUESTION 3.7.1?

(1 x 1) (1)

3.8 Suggest ONE reason why the site on the map is suitable for building a town like Queenstown.

(1 x 1) (1)

3.9 Refer to the topographic map in block **E1** and **G1.** State how the authorities provide water to Queenstown and surroundings.

(3 x 2) (6)

[24]

QUESTION 4: GEOGRAPHIC INFORMATION SYSTEMS (GIS)

4.1   Define the term *geographic information systems.*

_____

_____

                                                            (1 x 1)   (1)

4.2   Refer to block **D6** on the topographic map and identify the dam. FIGURE 4.2
       below is an extract of a satellite image showing Berry dam and surroundings in
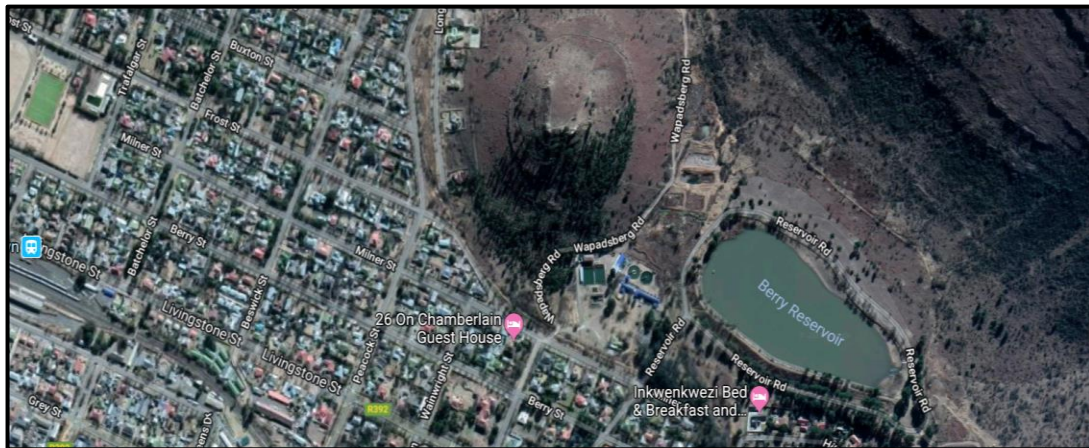   Queenstown.

FIGURE 4.2   [Source: https://www.google.com/maps]

       Choose the correct term between brackets.

   4.2.1   The satellite image in FIGURE 4.2 is data from (ground survey / remote
            sensing).

            _____

   4.2.2   The satellite image mainly displays (attribute / spatial) data.

            _____

   4.2.3   The satellite image is in a (raster / vector) format.

            _____

   4.2.4   The image consists of (pixels / points, lines, polygons).

            _____
                                                            (4 x 1)   (4)

4.3   Define *remote sensing.*

_____

_____

                                                            (1 x 1)   (1)

4.4   Compare Berry dam on the satellite image with the same dam in block **D6** on the topographic map. Mention TWO advantages of using the satellite image.

(2 x 1)   (2)

4.5   List any FOUR examples of data layers from the satellite image. You may also refer to blocks **D5**, **D6** and **D7** on the topographic map.

(4 x 1)   (4)

4.6   Mention any FOUR components of GIS.

(4 x 1)   (4)

[16]

TOTAL: 75

ROUGH WORK AND CALCULATIONS
(NOTE: Do NOT detach this page from the question paper.)