SENIOR SECONDARY IMPROVEMENT PROGRAMME 2013

GRADE 12

GEOGRAPHY

TEACHER NOTES

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TEACHER NOTES

SESSION 12.1

TOPIC: PEOPLE AND PLACES – PROCESSES AND SPATIAL PATTERNS

LESSON OVERVIEW

1.   Typical exam questions: 55 minutes
2.   Review/solutions/memo: 35 minutes

! | **Teacher Note:** During the examinations, the topic People and Places, and the topic Rural and Urban settlements will be addressed in Paper 1 Section B. The learners' experience of place(s) where they have lived will help them recognise aspects of various kinds of settlements. When travelling, they must look for examples, as well as at examples addressed in the media (TV or radio, newspapers and magazines). They will be able to see what is happening to the world's cities, towns and rural areas all around.

SECTION A: TYPICAL EXAM QUESTIONS

QUESTION 1: Multiple-choice questions   5 minutes   *(Adapted from various past papers)*

1.1   Four options are provided as possible answers to the following questions.
       Choose the answer and write only the letter A-D next to the question number
       (1.1.1 – 1.1.5), for example 1.1.6.B.

1.1.1   The smallest rural settlement type is a:
        A   hamlet
        B   isolated farmstead
        C   low-order service
        D   village

1.1.2   A settlement is classified as rural as a result of the…
        A   number of people living in the settlement
        B   size of the settlement
        C   function of the settlement
        D   number of low-order activities performed by the settlement

1.1.3   Site is influenced by the following factors:
        A   water, defence, climate, aspect
        B   water, defence, relief, fuel
        C   water, topography, altitude, aspect
        D   historical circumstances, water, farmland

1.1.4   Dry-point settlements occur near…
        A   deserts
        B   oases
        C   marshes
        D   higher ground

1.1.5   Agriculture is an example of a … economic activity
        A   quaternary
        B   tertiary
        C   secondary
        D   primary.   (5 x 2) [10]

HINTS
Hint 1 – Never leave out questions – especially not multiple choice questions
Hint 2 – Number correctly and write only the correct letter next to the number, e.g. 1.1.4 C
Hint 3 – Never write down two answers – you will get no marks

QUESTION 2:   15 minutes   22 marks
(Source: FET Senior Geography grade 12 Exam Study Guide)

2.   Refer to the map below showing an area in the southern hemisphere outside the
        tropics, and answer the questions that follow:

◇◇◇	water source	●	farmstead
road	road	⊢—⊢—	farm boundary
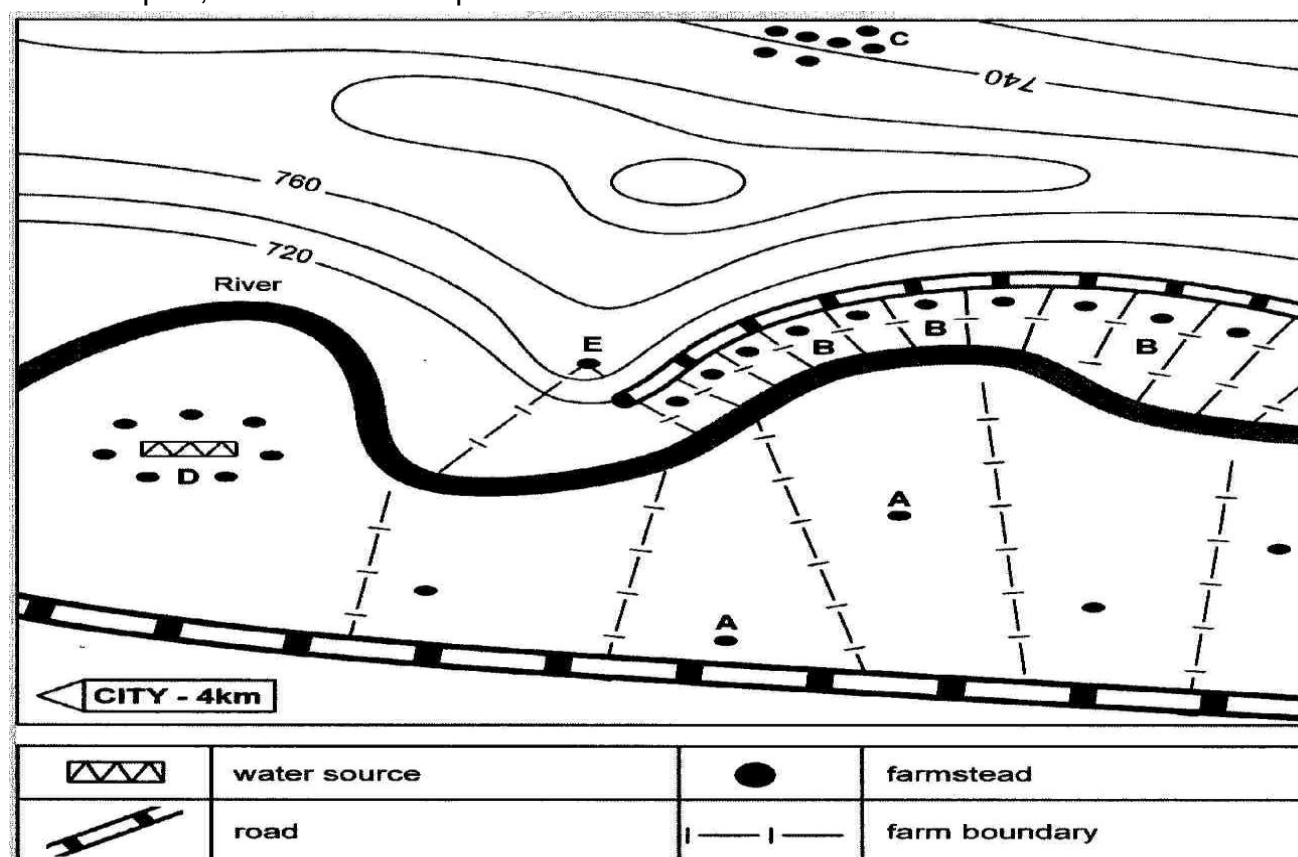
2.1   Match each of the settlements represented by the letters A to D, respectively, with one
        of the following distributions:
        • Random dispersed
        • Linear nucleation
        • Linear dispersed
        • Haphazard nucleation
        • Circular cluster   (4 x 2) (8)
2.2   For each of settlements A and B, state and explain the factor that might
        have influenced its morphology.   (2 x 2) (4)
2.3   Is settlement E a wet or a dry settlement? Give a reason for your answer.   (2 x 2) (4)
2.4   State one advantage that settlement B has over settlement A.   (1 x 2) (2)
2.5.   State and explain the climatic factor that could have been responsible for
        the location of settlement C.   (2 x 2) (4)
   [22]

QUESTION 3:   **5 minutes**   **10 marks**   *(Source: Adapted from past papers)*

3.   Match the geographical term with the correct definition. Write down only the question number and answer, e.g. 3.1 B.

Geographical term	Definition
3.1 Site	A. Continuous built-up area formed by the joining together of large, expanding settlements
3.2 Secondary sector	B . The ground or area on which a settlement is built
3.3 Situation	C . Economic activities producing goods using raw materials
3.4 Conurbation	D . Largest city or urban agglomeration
3.5 Metropolis	E. Large area of urban development, original towns separate towns and cities that grow outwards and join together

(5 x 2) [10]

QUESTION 4:   **15 minutes**   **28 marks**   *(Source: FET Exam Study Guide Gr 12)*

4.   Look carefully at the sketch below and answer the questions that follow:
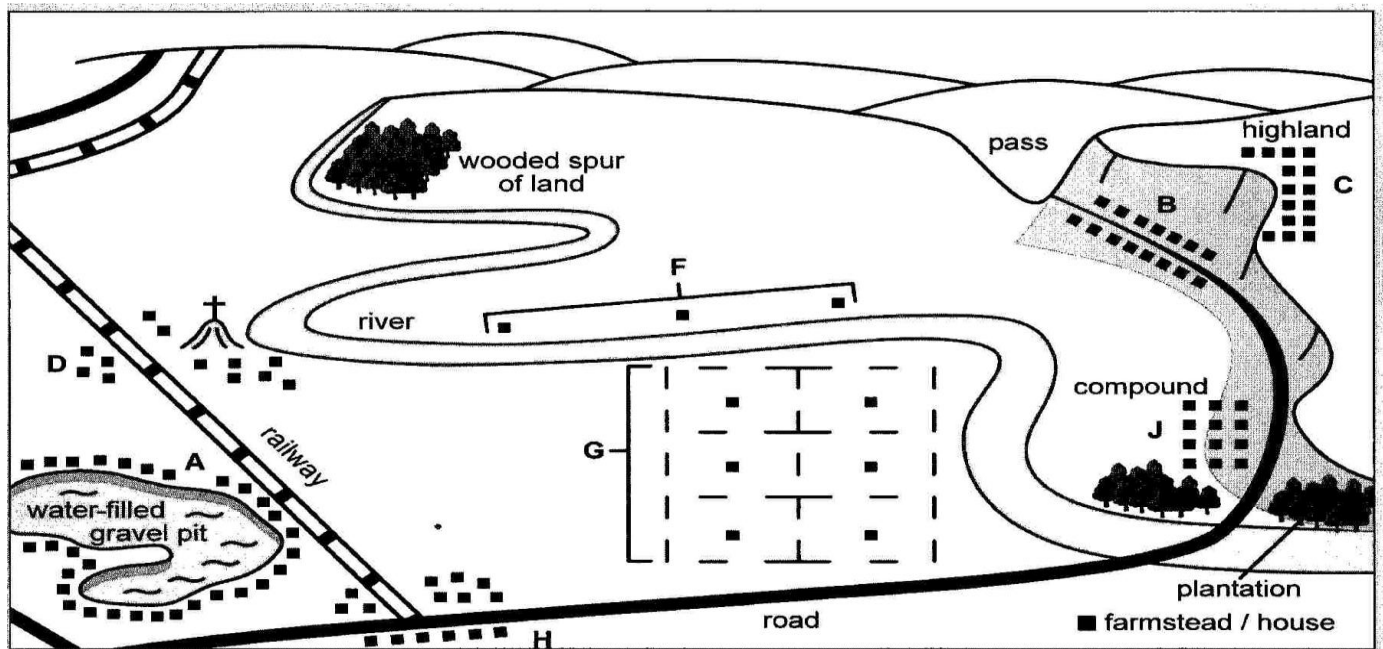
4.1   Name the factors that influenced the location of each of the settlements labelled A, B, C and H.   (4 x 2) (8)

4.2   Settlements labelled D, B and J are nucleated.

4.2.1 Identify the type of nucleated pattern each settlement represents.   (3 x 2) (6)

4.2.2 State and explain briefly the socio-economic / human factor that gave rise
to each of the settlements (D, B and J).   (3 x 2) (6)

4.2.3 Identify each of the dispersed settlements represented by the letters
F and G.   (2 x 2) (4)

4.2.4 State and explain briefly the factor that influenced the morphology of
the settlement labelled G.   (2 x 2) (4)

                                                                 [28]

QUESTION 5:   **5 minutes**   **10 marks**   *(Source: DOE FEB / MARCH 2009)*

5.1   Use the figure below to assist you to answer the question below. Choose a
term from the list provided that will match each of the statements labelled A
to E, respectively. Write only the letter (A – E) and the selected term.

    LIST OF TERMS

Secondary activities, informal trading, quaternary activities, rural-urban fringe, positive
balance of trade, mining, rural settlement, gross national product, dispersed
 settlement, nucleated settlement, site, break-of-bulk-point, tertiary activities, green belt
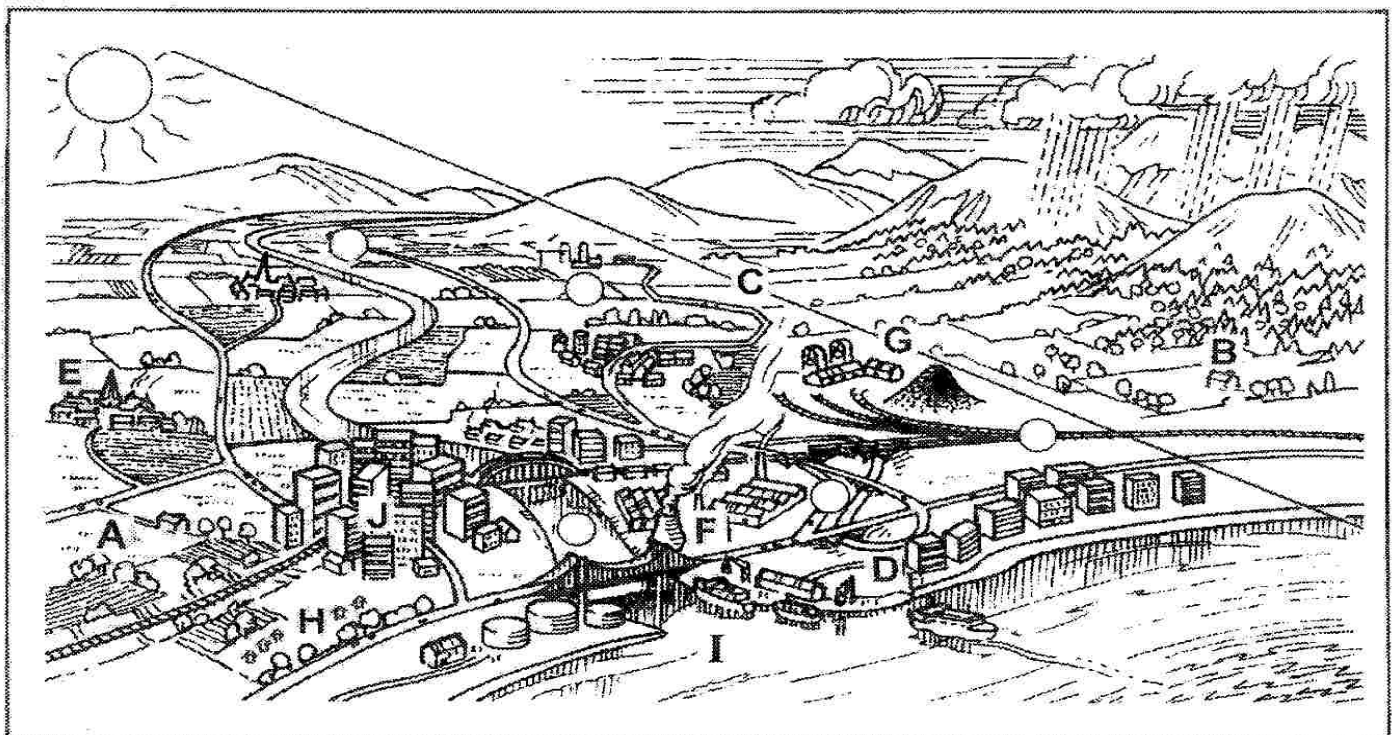
A _____	Type of settlement referred to as uni-functional
B _____	Pattern associated with a single farmstead
C _____	Zone where rural and urban functions merge
D _____	Where one type of transport is replaced by another
E _____	Precise land on which a settlement is located
	Activity concerned with the processing of raw material
	Extraction of raw materials from the earth
	An open space in a settlement for recreation
	More goods are exported than imported at the harbour
	Specialised skills and information available in the CBD

(5 x 2) [10]

SECTION B: SOLUTIONS AND HINTS TO SECTION A

QUESTION 1

1.1

1.1.1 B√√

1.1.2 C√√

1.1.3 B√√

1.1.4 D√√

1.1.5 D√√   (5 x 2) **[10]**

QUESTION 2

2.1   A = random dispersed√√

        B = linear dispersed√√

        C = linear nucleated√√

        D = circular cluster√√   (4 x 2) (8)

2.2   A – relief – flat land / private land ownership√√

        B – access to the road / river√√   (2 x 2) (4)

2.3   Dry-point settlement found on river terrace to avoid flooding.   (2 x 2) (4)

2.4   Access to transport routes√√

        Sharing of agricultural ideas√√

        Greater degree of social contact√√

        Greater security√√

        [Any ONE]   (1 x 2) (2)

2.5   Aspect/ angle of insolation√√

        C is located on the north-facing slope and in the southern hemisphere

        the north- facing slopes are warmer because they receive the direct

        rays of the sun√√   (2 x 2) (4)

                                                                            [22]

QUESTION 3

3.1   A√√
3.2   C√√
3.3   B√√
3.4   E√√
3.5   D√√   (5 x 2) **[10]**

QUESTION 4

4.1   A – water√√
      B – pass / road√√
      C – defence
      H – break-of-bulk point√√   (4 x 2) (8)
4.2
4.2.1 D – haphazard nucleated√√
      B – linear nucleation√√
      J – uniform cluster√√   (3 x 2) (6)
4.2.2 D – religion- people of common faith e.g. Mormons√√
      B – found at entrance to pass – access to other side√√
      J – labourers nucleated on plantation estate√√   (3 x 2) (6)
4.2.3 F – loose linear√√
      G – regular / uniform dispersion√√   (2 x 2) (4)
4.2.4 Relief√√ - flat land lead to uniform dispersed settlements√√   (2 x 2) (4)
      [28]

QUESTION 5

5.1   A – rural settlement√√
      B - dispersed√√
      C – site√√
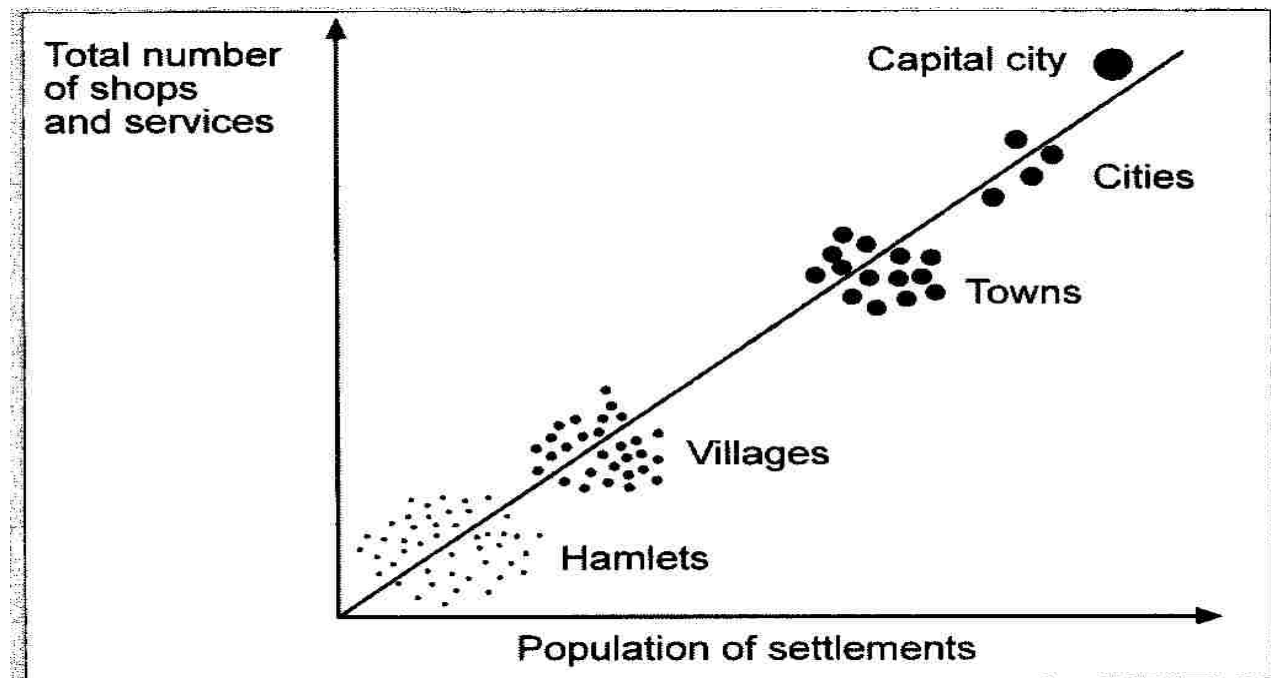   D - secondary√√
      G - mining√√   (5 x 2) **[10]**

SECTION C: HOMEWORK

QUESTION 1:   10 minutes   10 marks
(Source: FET Senior Geography Grade 12 Exam Study Guide)

Study the scatter graph and answer the questions that follow:

1.1   What relationship does the graph show?   (1 x 2) (2)
1.2   What is the relationship between hamlets and villages?   (1 x 2) (2)
1.3   What is the relationship between villages and cities with regard to
         population?   (1 x 2) (2)
1.4   Which of the settlement types, hamlets, villages, towns or cities, would
         be found in the largest numbers? Give a reason for you answer.   (2 x 2) (4)
                                                                                                                                   [10]

QUESTION 2:   **20 minutes**   **28 marks**
*(Source: FET Senior Geography Grade 12 Exam Study Guide)*

2.   Study the diagram below which shows maps X, Y and Z as three different settlements in rural areas:
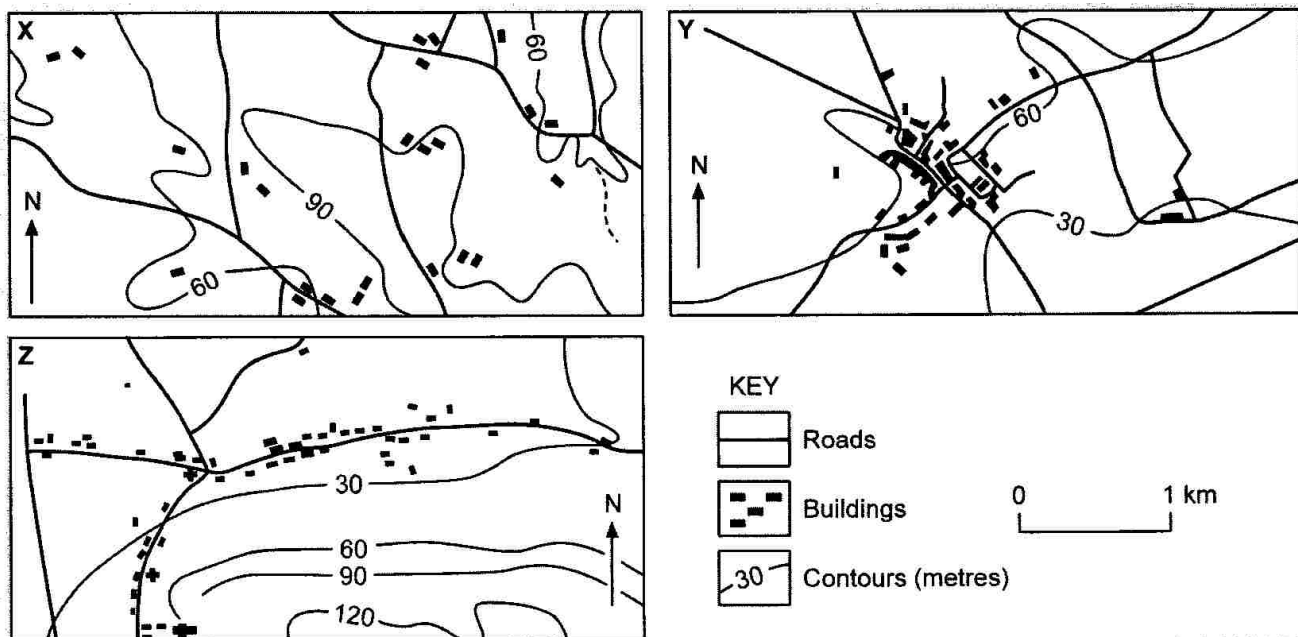
2.1   Write down X, Y and Z as a list and name each settlement pattern next to the appropriate letter.   (3 x 2) (6)
2.2   Describe each settlement pattern.   (3 x 2) (6)
2.3   Explain why each of these rural settlement patterns may have developed.

(3 x 2) (6)
2.4   Mention two economic disadvantages associated with settlement Y, and two economic advantages enjoyed by settlement X.   (4 x 2) (8)
2.5   Why do settlements Z and Y have a social advantage over settlement X?   (1 x 2) (2)

[28]

QUESTION 3:   **15 minutes**   **24 marks**
(Source: FET Senior Geography Grade 12 Exam Study Guide)

Study the sketch that shows possible settlement sites, on the following page and answer the questions that follow:
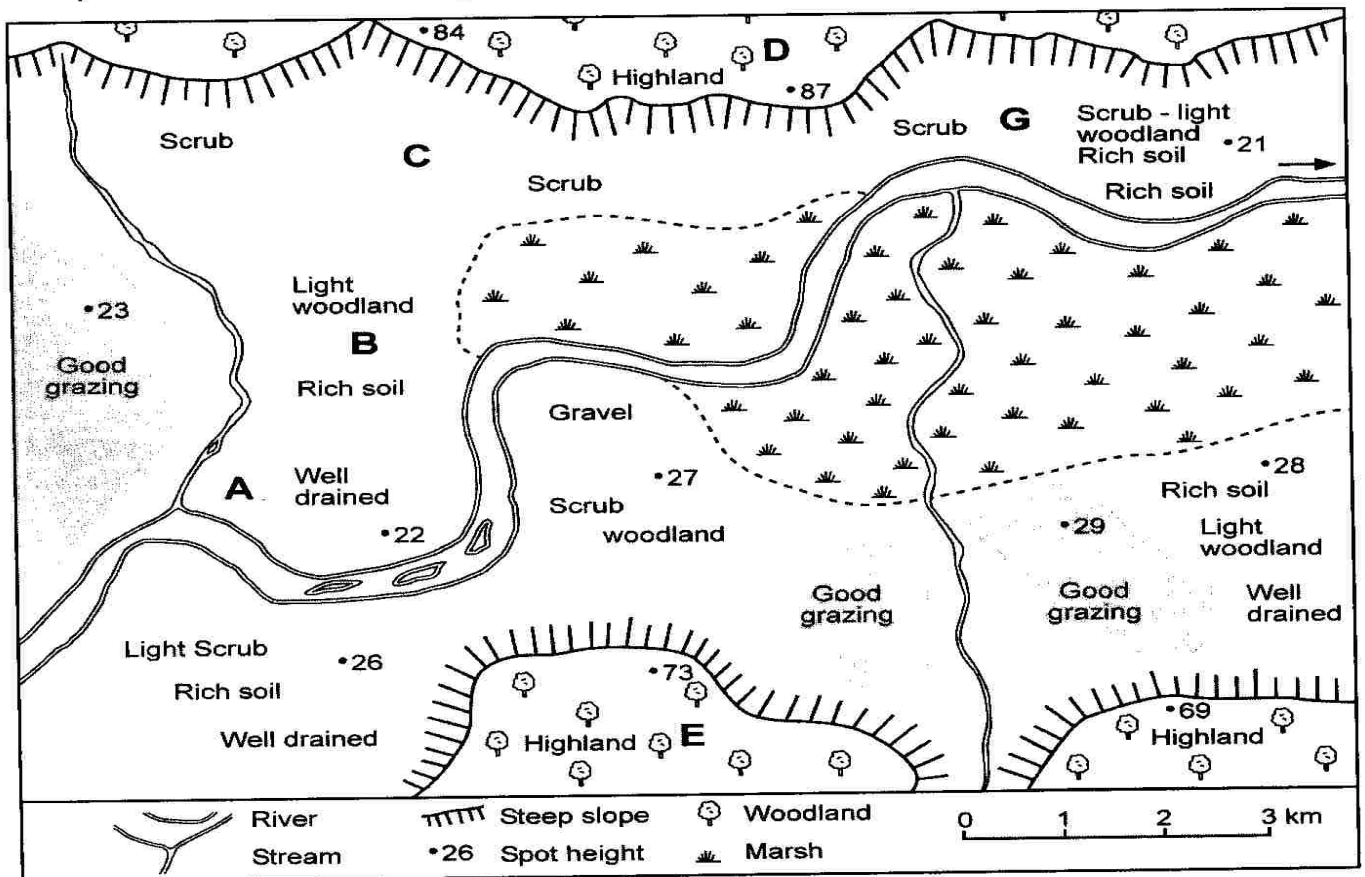
3.1   Differentiate between 'site' and 'situation' of a settlement.   (2 x 2) (4)

3.2   Match each of the settlements labelled A, B, C, D and E with one of the
        following factors:

3.2.1   Defence against neighbouring tribes

3.2.2   Availability of a permanent water source

3.2.3   Close to fuel supply and building materials

3.2.4   Bridging point

3.2.5   Dry point   (6 x 2) (12)

3.3   Give two reasons for A not being an ideal site for a settlement.   (2 x 1) (2)

3.4   Assume that a nucleated rural settlement develops at G:

3.4.1   State the shape that it is most likely to take.   (1 x 2) (2)

3.4.2   Give two reasons for your answer.   (2 x 2) (4)

                                                                                    [24]

HINTS

Hint 1- Learners must keep the mark allocation in mind when answering questions.

Hint 2 - Learners must be able to identify settlements from sketches and then discuss /
         explain how they form and how they change.

SECTION D: SOLUTIONS TO HOMEWORK

QUESTION 1

1.1	Number of functions and population size√√	(1 x 2) (2)
1.2	Hamlets have fewer functions and population size√√	(1 x 2) (2)
1.3	A village has a smaller population than a city√√	(1 x 2) (2)
1.4	Hamlets or villages√√ as they are the smallest √√	(2 x 2) (4)

[10]

QUESTION 2

2.1 X – scattered / dispersed √√
     Y – clustered / nucleated √√
     Z – linear √√   (3 x 2) (6)
2.2 X – settlements occur over a wide / extensive area√√
     Y – settlements are confined to a smaller area and occur close together
     Z – settlements occur in rows (lines) next to each other√√   (3 x 2) (6)
2.3 X – relief / high- lying area√√
     Y – at transport crossing√√
     Z – alongside roads at lower lying areas√√   (3 x 2) (6)

2.4 Settlement Y: economic disadvantages
  • No independent decision-making√√
  • Cannot show individual initiative√√
  • Fields are scattered – time wasting√√
  • Machinery must be shared√√
  • Difficult to be economically successful√√   [Any TWO]

     Settlement X: economic advantages
  • Farmer works for self, keeps own profits√√
  • More efficient√√
  • Can use own single tract of land√√
  • Can maximise use of machinery (no need to share) √√
                                    [Any TWO]   (4 x 2) (8)

2.5 Live close together:
  • Daily social contact√√
  • Community involvement
  • Protection √√
  • Sharing of ideas√√
  • Helping each other√√   [Any ONE]   (1 x 2) (2)

[28]

QUESTION 3

3.1   Site of a settlement refers to the exact piece of land√√ which is occupied by a
settlement and the physical nature of that terrain: relief, soil characteristics,
drainage.
Situation of a settlement is a broader concept referring to the relationship of
The settlement with its immediate environment√√ (how it is situated with
respect to the general relief of the area, traffic routes, and the type of soil).   (2 x 2) (4)

3.2
3.2.1 D√√
3.2.2 A√√
3.2.3 E√√
3.2.4 B√√
3.2.5 A√√
3.2.6 C√√   (6 x 2) (12)

3.3   Danger of flooding – flood plain√√
Marshes are present – difficult to practise farming or construct buildings –
very costly to drain marshes√√
Breeding ground for insects√√   [Any TWO]   (2 x 1) (2)

3.4
3.4.1 linear√√   (1 x 2) (2)
3.4.2 The forests / woodlands would be cleared – deforestation would result in
less oxygen. √√ The river water near E could become polluted. Its water
would be used by the inhabitants of settlement E. √√ Ecosystems would be
affected √√

                                                                  [Any TWO]   (2 x 2) (4)
                                                                                                          [24]

TOPIC 1: SUSTAINABILITY- RELATED STRATEGIES AND URBAN SETTLEMENTS

> **Teacher Note:** The content of Sessions 15 to 17 covers all work examined in Question 3 and Question 4 of Paper 1. Please advise learners to study definitions and terminology well. Questions 3 and 4 are also the most popular questions that are set in Paper 1 as they seem to be easier to study and understand. It is vital that the learners use the stimulus material in all of the questions, as most answers are based on the accompanying diagrams, figures and graphs.

SECTION A: TYPICAL EXAM QUESTIONS

QUESTION 1:   **10 minutes**   **14 marks**   *(Source: DoE various papers)*

Shortly after coming to power in 1994, the new government introduced the RDP. The RDP principles are still used as guidelines today, but the basis of the government's economic strategy at present is called GEAR.

1.1	What does RDP stand for?	(1 x 2) (2)
1.2	Name the key principles of this programme.	(2 x 2) (4)
1.3	What does GEAR stand for?	(1 x 2) (2)
1.4	What are the key elements of this strategy?	(3 x 2) (6)

[14]

**QUESTION 2:**   **5 minutes**   **10 marks**   *(Source: DoE various papers)*
Study the following graph which shows the relationship between the number of shops and the size of the population.
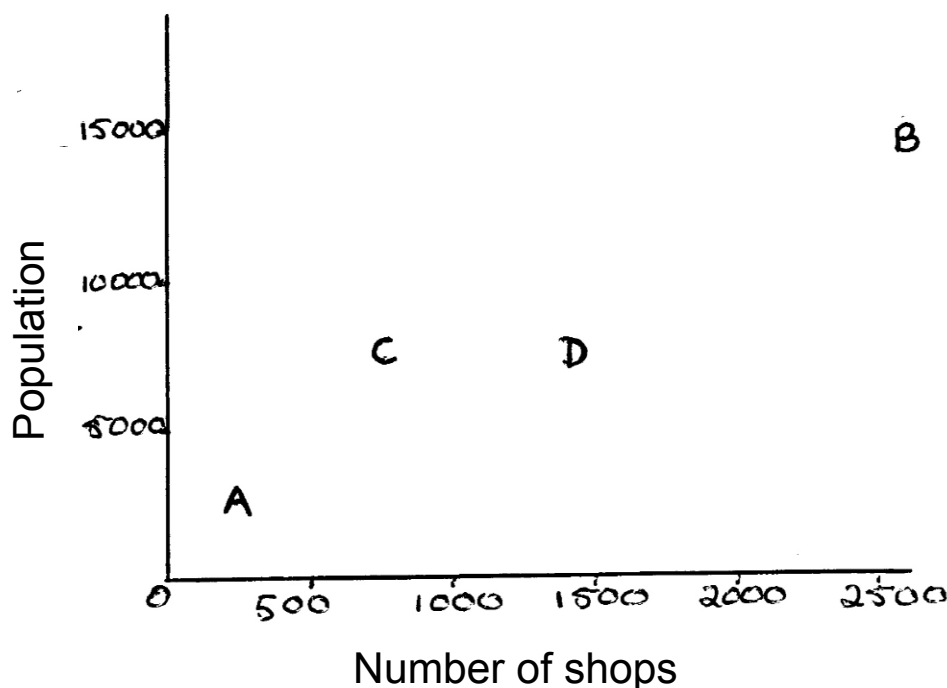
2.1   How many shops are there in settlement A?   (1 x 2) (2)
2.2   What is the population of settlement B?   (1 x 2) (2)
2.3   Explain what is meant by the term "urban hierarchy", using the
       relationship shown on the graph between the number of shops and
       the size of the population.   (3 x 2) (6)
          [10]

QUESTION 3:   **10 minutes**   **20 marks**   *(Source: DoE March 2010)*

Refer to the map below
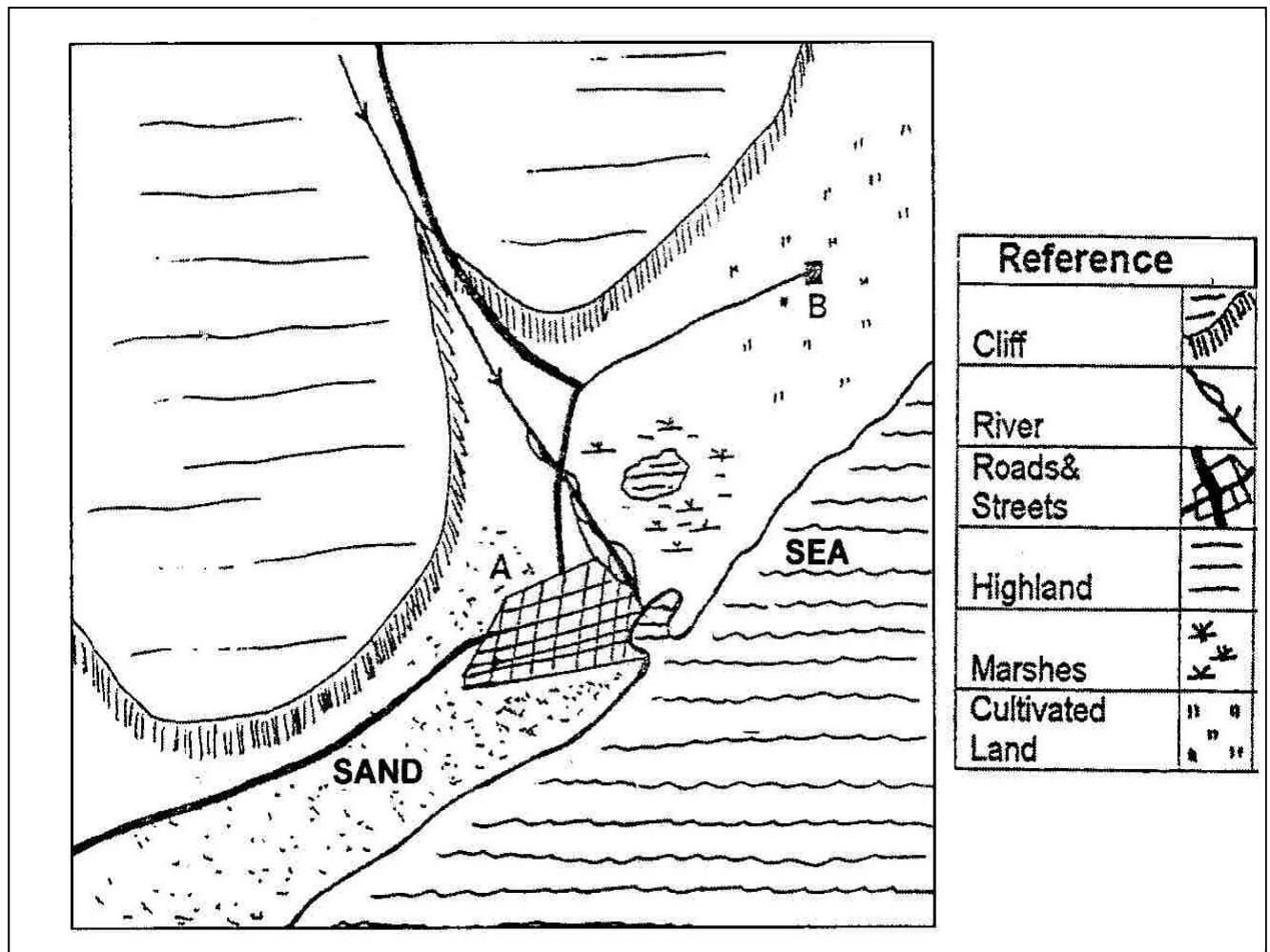
3.1   What factors determined the site of city A?   (2 x 2) (4)
3.2   Why did the main development of the city occur west of the river
       and not east of the river?   (2 x 2) (4)
3.3   What is the main function of city A? Give reasons for your answer.   (2 x 2) (4)
3.4   What is the main function of city B? Give a reason for your answer.   (2 x 2) (4)
3.5   Differentiate between Urban Growth and Urban Expansion.   (2 x 2) (4)
          [20]

QUESTION 4:   10 minutes   22 marks   *(Source: DoE March 2009)*

Refer to the following figure:
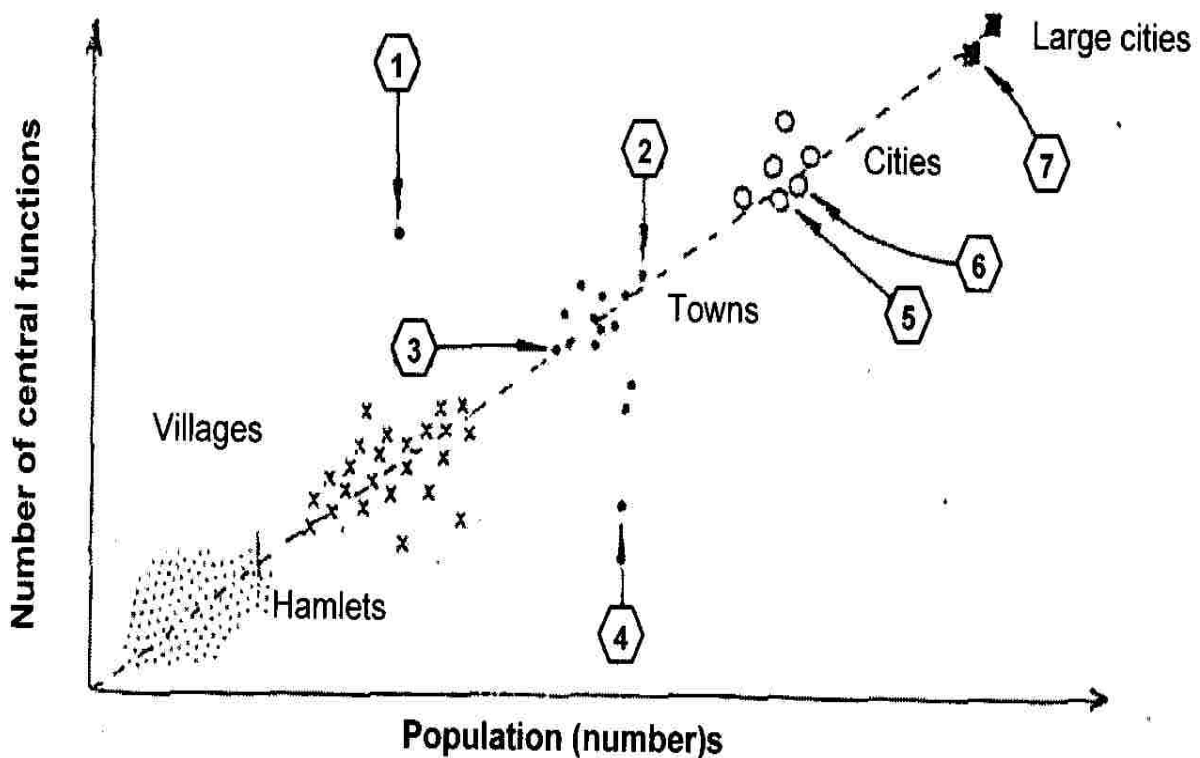
4.1   What is the relationship between the two factors shown in the graph?   (1 x 2) (2)
4.2   Name the two largest types of cities.   (2 x 2) (4)
4.3   Explain the term range by comparing 3 and 5.   (2 x 2) (4)
4.4   What is a settlement's sphere of influence?   (2 x 2) (4)
4.5   The distribution of urban settlements is often determined by the
       function of the town. List three main settlement functions and their
       respective patterns.   (3 x 2) (6)
4.6   What is the opposite of urbanisation?   (1 x 2) (2)
                                                                                      [22]

TOPIC 2: STRUCTURES AND PATTERNS OF URBAN SETTLEMENTS, HUMAN-ENVIRONMENT INTERACTIONS AND SUSTAINABILITY STRATEGIES

QUESTION 1:   **5 minutes**   **10 marks**   *(Source: DoE March 2008)*

1.1 An urban area has different land-use zones and functions. The land value differs in each of these land-use zones. Complete the following description by using the terms provided in the list below. Write only the terms next to the question number (1.1.1 - 1–1.5). Refer to the figure on the following page to assist you.

Central Business District (CBD); transition zone (zone of decay); rural-urban fringe; residential
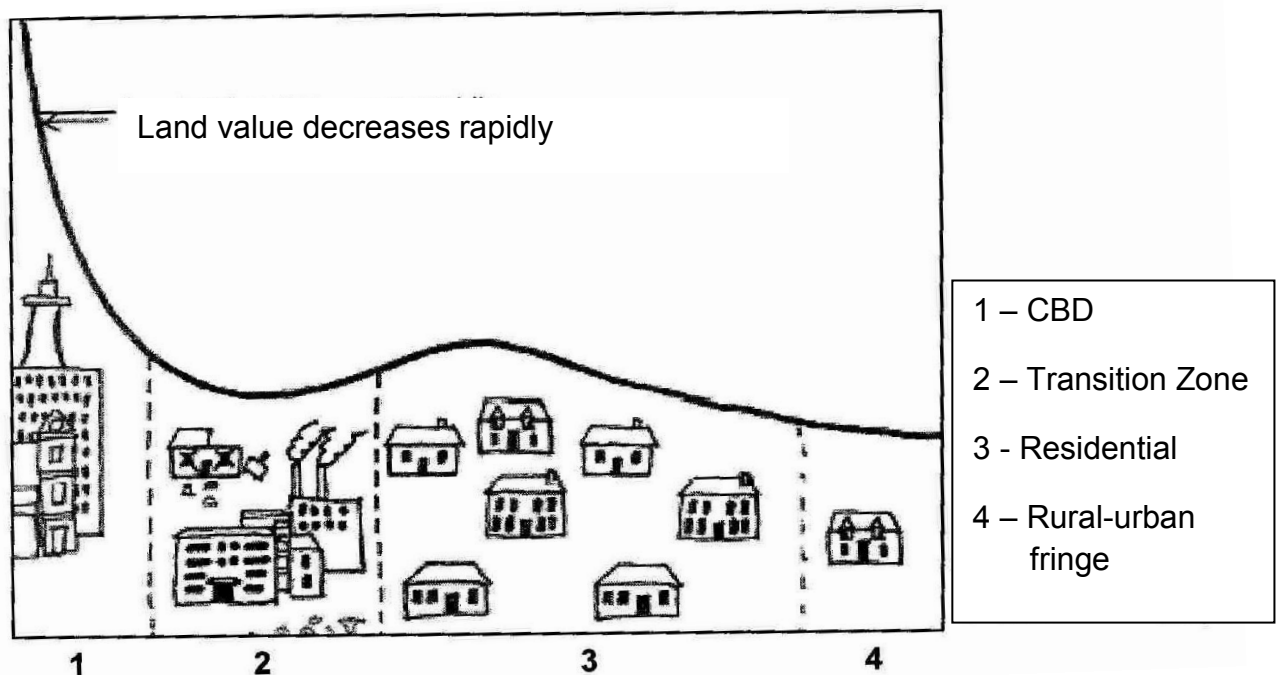
The same term may be used for more than one answer

1.1.1	Has a mixture of functions such as commercial, residential, hotels, entertainment
1.1.2	Commercial zone characterised by high-order functions
1.1.3	Land-use zones that covers the largest area in an urban settlement
1.1.4	Land-use zone with the highest land value
1.1.5	Dilapidated zone around the CBS

(5 x 2) [10]

QUESTION 2:   **5 minutes**   **15 marks**   *(Source: DoE March 2008)*

The photograph shows the CBD of Sao Paulo, Brazil. Answer the questions that follow:

2.1   The street pattern in the CBD of Sao Paulo is rectangular. Explain the
        effect of this street plan on rush hour traffic congestion.   (3 x 1) (3)

2.2   Arrange the following from the lowest to the highest rent and give a
        reason in each case:
        Top floor
        Middle floor
        Ground floor   (3 x 1) (3)

2.3   Explain why it was necessary for the owner of building A to build such
        a tall building.   (3 x 1) (3)

2.4   As the CBD becomes increasingly overcrowded and congested, many
        businesses will move to cheaper more attractive locations in the suburbs.
        What effect will this have on the rents charged for office space in building A?
        Explain your answer.   (3 x 2) (6)
                                                                                    [15]

QUESTION 3   12 minutes   29 marks   *(Source: DoE March 2008)*

        The aerial photograph below shows the extent of informal housing in a section of
        Cape Town.
        Answer the questions that follow.
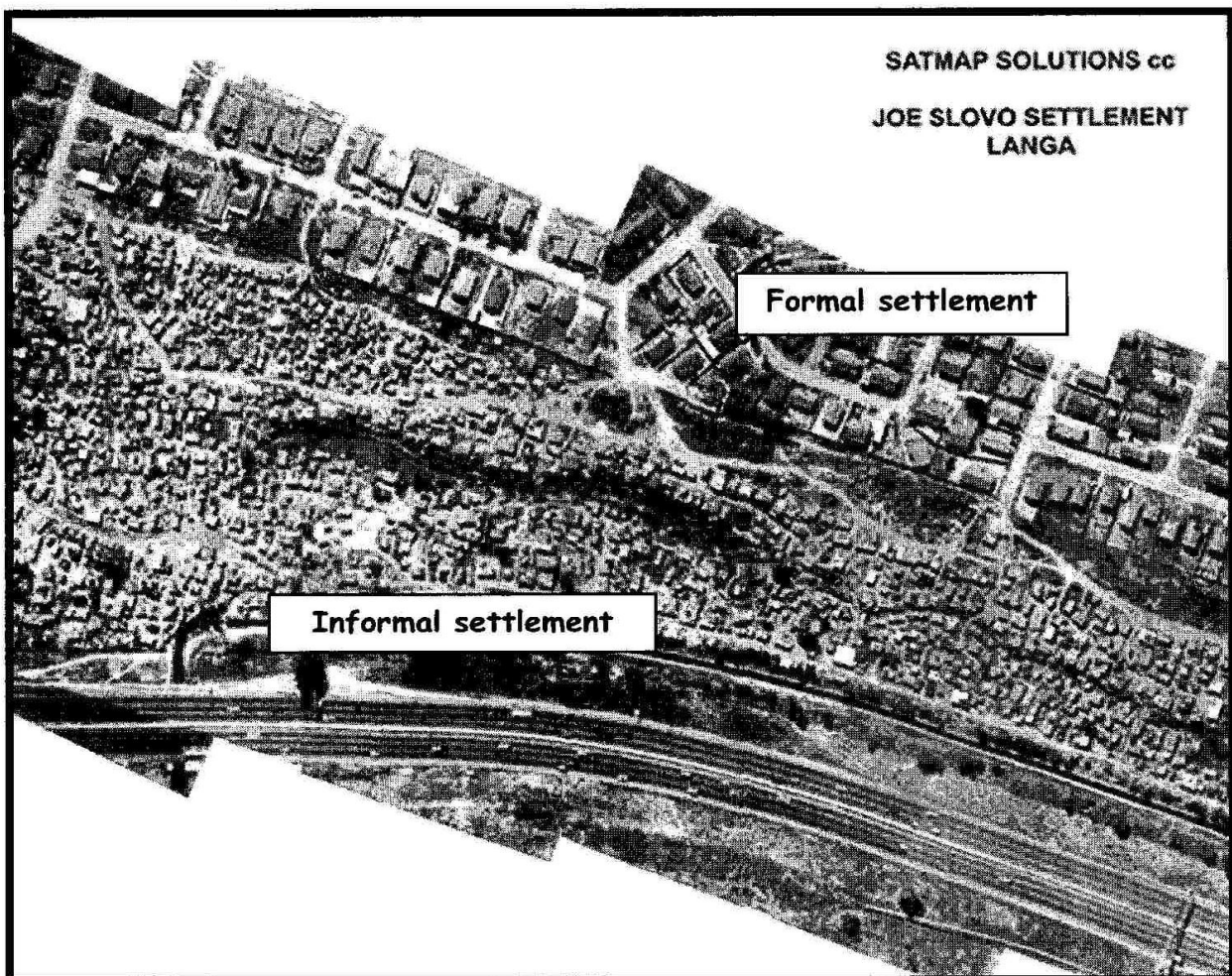
3.1.1   Describe the push factors, which have led to the rural urban movement
        in this case?   (3 x 2) (6)

3.1.2   Name FIVE socio-economic problems that the inhabitants of the informal
        settlement shown in the photograph experiences?   (5 x 1) (5)

3.1.3   An informal settlement of this size is a serious problem for any city. Explain
        why it is necessary for the local municipality to spend large sums of money
        upgrading the informal settlement.   (4 x 2) (8)

3.1.4   Name FOUR basic municipal services which should be supplied to the
        informal area as a priority.   (4 x 1) (4)

3.1.5   Make a list of the basic needs which need to be satisfied in this community
        before social upliftment projects, such as the provision of playgrounds and
        centers for skills training, can be successful.   (6 x 1) (6)
                                                                                `
                                                                               [29]

QUESTION 4   **15 minutes**   **30 marks**   *(Source: DoE March 2008)*

4.1   Study the photograph of the CBD of Johannesburg printed below. Describe and
        account for the following:

CBD OF JOHANNESBURG

4.1.1   Why are the tallest buildings found in the CBD?   (2 x 2) (4)
4.1.2   Why are there so few residential buildings in the CBD?   (2 x 2) (4)

4.1.3 (a)   Retail occurs on a large scale in the CBD. What is meant
           by the term 'retailing'?   (1 x 2) (2)

       (b)   Give a reason why most of the retail shops occur on the ground
           and first floors of buildings.   (1 x 2) (2)

4.2   The following graph indicates the land use values of land use zones.

4.2.1 Copy the graph and indicate the location of the following on it:
       The CBD (A)
       The inner city (B)
       The neighbourhood shopping centre (C)
       The outer suburbs (D)
       Heavy industries (HI)   (5 x 2) (10)

4.2.2 Give reasons for your choice of the location of heavy industries
       in 4.2.1.   (4 x 2) (8)
                                                        [30]

SECTION B: SOLUTIONS AND HINTS TO SECTION A -

TOPIC 1

QUESTION 1

1.1   Reconstruction and Development Programme√√   (1 x 2) (2)

1.2   Promote equality, Improve quality of life√√, sustaining the nation's resources
       create jobs, protect the nation's ecosystems. √√   (2 x 2) (4)

1.3   Growth employment and redistribution√√   (1 x 2) (2)

1.4   Attract foreign investors√√, create jobs√√, spread wealth√√, develop
       underdeveloped areas.   (3 x 2) (6)
                                                    [14]

QUESTION 2

2.1   A- About 250 √√   (1 x 2) (2)

2.2   B – 15 000 √√   (1 x 2) (2)

2.3   Urban hierarchy – central places are not all the same size/ the more people
       there are√√/ the more services will be provided√√/ and the more higher order
       services will be available√√/ towns fall into a number of classes/ the larger
       the town, the greater its range   (3 x 2) (6)
                                                       [10]

QUESTION 3

3.1	Flat√√ fertile ground, water√√	(2 x 2) (4)
3.2	West is fertile√√, well drained√√(sand) whilst east is a marsh	(2 x 2) (4)
3.3	Trade and transport city√√ break of bulk√√	(2 x 2) (4)
3.4	Farming√√ - service centre√√	(2 x 2) (4)
3.5	Urban growth – number of population increases√√ Urban expansion – size gets bigger√√	(2 x 2) (4)

[20]

QUESTION 4

4.1	As population increases so number of functions increases√√	(1x2) (2)
4.2	Megalopolis√√, conurbation√√	(2 x 2) (4)
4.3	Range is the distance people are prepared to travel√√ Thus people are prepared to travel further to get to 5 than 3√√	(2 x 2) (4)
4.4	The sphere of influence is the area√√ around a central place from which people will be attracted towards the settlement. √√	(2 x 2) (4)
4.5	Central place – even distribution√√ Trade and transport town – linear distribution√√ Specialised town - clustered√√	(3 x 2) (6)
4.6	Counter-urbanisation √√	(1 x 2) (2)

[22]

TOPIC 2

QUESTION 1

1.1
1.1.1 Transition zone / zone of decay / CBD√√
1.1.2 Central Business District / CBD√√
1.1.3 Residential√√
1.1.4 Central Business District / CBD√√
1.1.5 Transition zone / zone of decay√√   (5 x 2) **[10]**

QUESTION 2

2.1	Grid pattern√ – leads to congestion√, may lead to grid lock√, wastes fuel and time	(3 x 1) (3)
2.2	Middle – usually offices, not easy to access √ Top – good view√ Ground – many passing consumers thus high rent√	(3 x 1) (3)
2.3	Land is very expensive√. The more floors the greater the rental space he has available√. This will affect the land and rates found in the CBD√	(3 x 1) (3)
2.4	It will lower rents√√ as the demand decreases√√, i.e. less demand thus lower prices, but will still be expensive√√	(3 x 2) (6)

[15]

QUESTION 3

3.1

3.1.1 Lack of jobs√√ few services√√ famine√√ low standard of living   (3 x 2) (6)

3.1.2 Lack of food√ lack of services such as sanitation /water√ no formal
housing√ unemployment√ no/few educational facilities√   (5 x 1) (5)

3.1.3 Crime√√, diseases break out√√, fires spread rapidly√√, improve basic
standard of living√√   (4 x 2) (8)

3.1.4 Basic needs - food√, shelter√, water√, education√, clothing, safety

          (4 x 1) (4)

3.1.5 Food√, water√, housing√, sanitation√, jobs√, education√   (6 x 1) (6)

[29]

QUESTION 4

4.1

4.1.1 Land here is the most in demand√√ thus land prices are very high√√ It is
the most accessible part of the city.   (2 x 2) (4)

4.1.2 Residents have moved away to cheaper land√√ residents prefer quiet of
the suburbs where there is less congestion and pollution. √√   (2 x 2) (4)

4.1.3 (a)   Shops that sell goods to the public√√   (1 x 2) (2)
       (b)   This allows customers the opportunity to do window shopping,. √√
                Customers do not want to travel up a lift to browse for goods to
                purchase.   (1 x 2)(2)

4.2

4.2.1.

          (5 x 2) (10)

4.2.2 On the outskirts √√/ where land is available and cheaper√√ / away from
residential areas √√/ closer to low income residential areas√√

          (4 x 2) (8)
          [30]

SECTION C: HOMEWORK

QUESTION 1:   *(Source: DoE March 2008)*

Refer to Figure 1 that follows, which shows an urban settlement – Senzinani – and the land-use zones typical of an urban settlement.
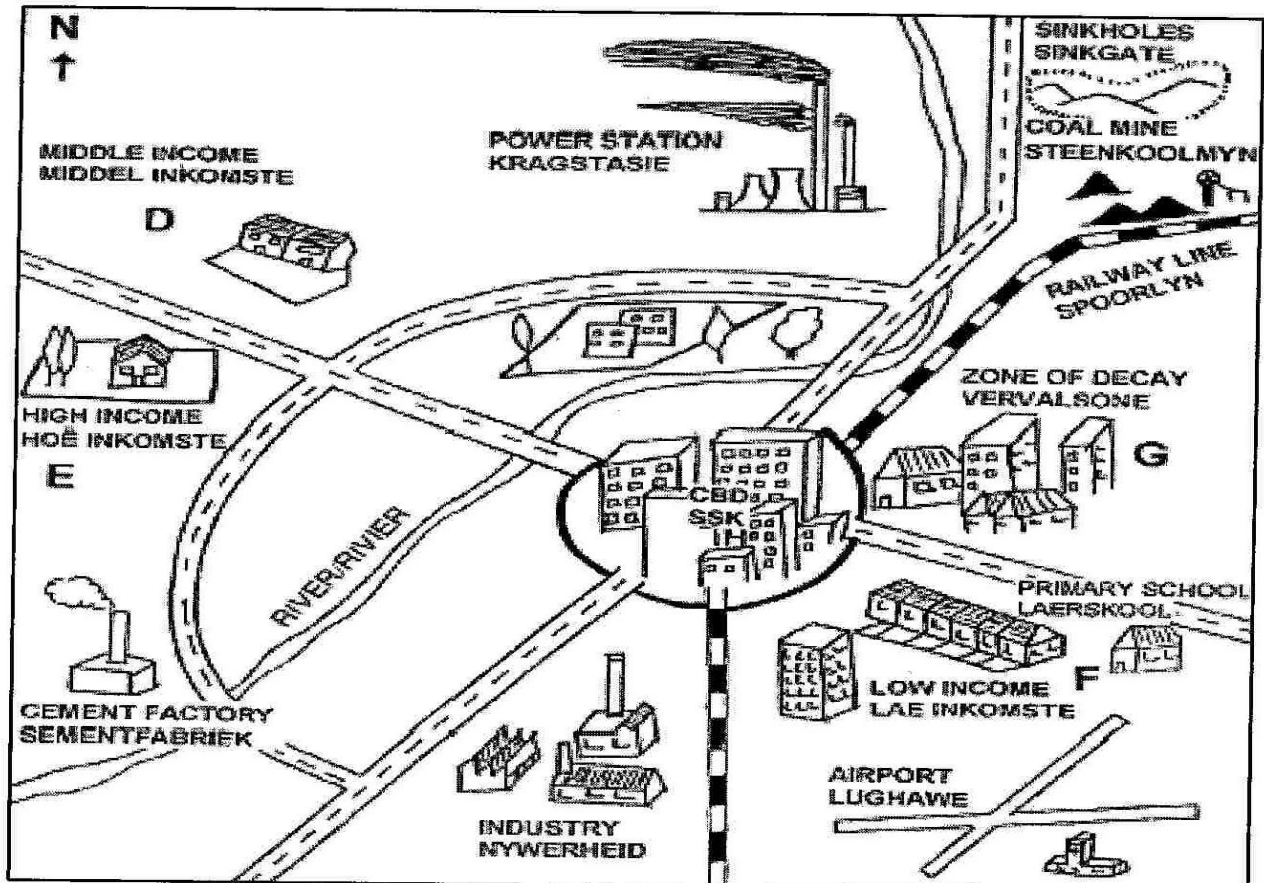

Figure 1

1.1   Residential areas are classified according to income. Read the following advertisements that appeared in a major newspaper. The names of the residential suburbs were changed and do not refer to any specific residential suburb in South Africa.

SHONA:	ROSA:	VIOLET:
Spacious 2½ bedroom flat, excellent condition, lovely kitchen, intercom/security system, under-cover parking. Prime position, close to primary school. Private sale. R150 000 or nearest offer.	3 bedrooms, lounge/dining room, 1½ bathroom, kitchen, outside buildings and large stand. R300 000, negotiable.	House for sale: R950 000 not negotiable. 4 bedrooms, 2 lounges, sunroom, TV room, study, 2 toilets, guest toilet, 2 full bathrooms, dining room, kitchen, scullery. Large grounds.

Match each of the advertisements with one of the places.
(D, E, F or G) in Figure 1.   (3 x 2) (6)
(a) Give a reason for each of the choices you made in question 1.1.
                                                                               (3 x 2) (6)
(b) Explain the difference in building density, visible in Figure 1, which
    exists between low- and high-income residential areas.   (2 x 2) (4)

1.2   Refer to the CBD located in the centre of the settlement illustrated in Figure 1.
       The following headline (loosely translated) appeared in the *Beeld*:

SHARP INCREASE IN NUMBER OF EMPTY OFFICES IN CBD

(a) What process is being referred to in the headline?   (1 x 2) (2)
(b) State TWO factors responsible for this process.   (2 x 2) (4)
(c) Discuss TWO factors that would attract office workers to work in offices
    away from the CBD.   (2 x 2) (4)
(d) State ONE location to which many new offices would migrate.   (1 x 2) (2)
(e) With reference to urban renewal projects, describe what can be done to
    reverse the process identified in Question 5.2 (a).   (2 x 2) (4)
                                                                                      [32]

SECTION D: SOLUTIONS TO HOMEWORK

QUESTION 1

1.1 (a)   Shona – F/D/G√√   Rosa- D√√   Violet - E√√   (3 x 2) (6)

    (b) Shona: In high-rise flat/high density – F

              Lowest cost – F

              Close to primary school – F

              Close to CBD – F

              Close to employment – F

              Good condition of apartment – D

              Urban renewal results in upgrading of buildings - G√√

      Rosa: Medium-sized house

             House has basic amenities

             Intermediate –cost house√√

      Violet: Large house

             Large plot / ground

             House has many luxury amenities

             Highest cost house √√   one reason for each choice)   (3 x 2) (6)

   (c) Low density – high income as people can afford large stands√√

      High density – low income as people can only afford small stands or afford

      housing in high-rise flats√√   (2 x 2) (4)

1.2 (a) Commercial / functional decentralisation√√   (1 x 2) (2)

   (b) Traffic congestion in CBD√√ inaccessibility√√, high level of pollution in CBD,

      High crime rate in CBD, Office space expensive in CBD, lack of open spaces,

      poor state of buildings, lack of parking for customers   (Any TWO)   (2 x 2) (4)

   (c) Less traffic/accessibility √√, more peaceful environment √√, less pollution √√,

      Modern buildings, less crime, aesthetic appeal/beauty. (any two)   (2 x 2) (4)

   (d) Suburbs on outskirts √√/ rural-urban fringe, outlying /regional shopping

      centres √√, Outlying malls/ walkways, office parks   (Any ONE)   (1 x 2) (2)

   (e) Modernise/upgrade buildings to meet needs of occupants√√

      Facadism- retaining the front of the building and build behind√√

      Gentrification – modernise old houses close to the CBD

      Develop obsolete spaces into loft apartments

      Develop entertainment opportunities in the CBD

      Demolish buildings to reduce high density

      Provide open spaces to CBD

      Develop walkways in the CBD

      Slum clearance   (Any TWO)   (2 x 2) (4)

                                                              [32]

TOPIC 1: TRANSPORT AND TRADE. THE IMPORTANCE AND CHALLENGES OF THE INFORMAL SECTOR

Teacher Note: The content of this session covers work that has been extensively covered in Grade 11, thus no hints or tips should be required. The work is purely revision of Grade 11 knowledge. This work is also examined in Question 3 and Question 4 of Paper 1. Please ensure that the learners study definitions and terminology well. Questions 3 and 4 are also the most popular questions that are answered in Paper 1. Please remind learners that it is vital that they use the stimulus material in all of the questions, as most answers are found in the accompanying diagrams, figures and graphs.

SECTION A: TYPICAL EXAM QUESTIONS

QUESTION 1: **8 minutes**   *(Source: DoE various papers)*

1.1 Define the concept 'balance of payments'   (1 x 2) (2)
1.2 Describe ways in which agriculture could possibly contribute to a
favourable trade balance in South Africa.   (4 x 2) (8)
1.2 How can South Africa improve its trade balance without being too
Dependent on the gold price?   (3 x 2) (6)
                    [16]

QUESTION 2: **5 minutes**   *(Source: DoE November 2008)*

Provide the correct term for the following:

2.1 Export value greater than import value.   (1 x 2) (2)
2.2 Value of all goods and services produced in a country in one year.   (1 x 2) (2)
2.3 United Nations policy on sustainable development.   (1 x 2) (2)
                    [6]

QUESTION 3: **10 minutes**   *(Source: DoE November 2009)*

Study the graph on the following page, which shows the total population, the economically active population and employment trends in South Africa (1960 – 2000) and answer the questions that follow.
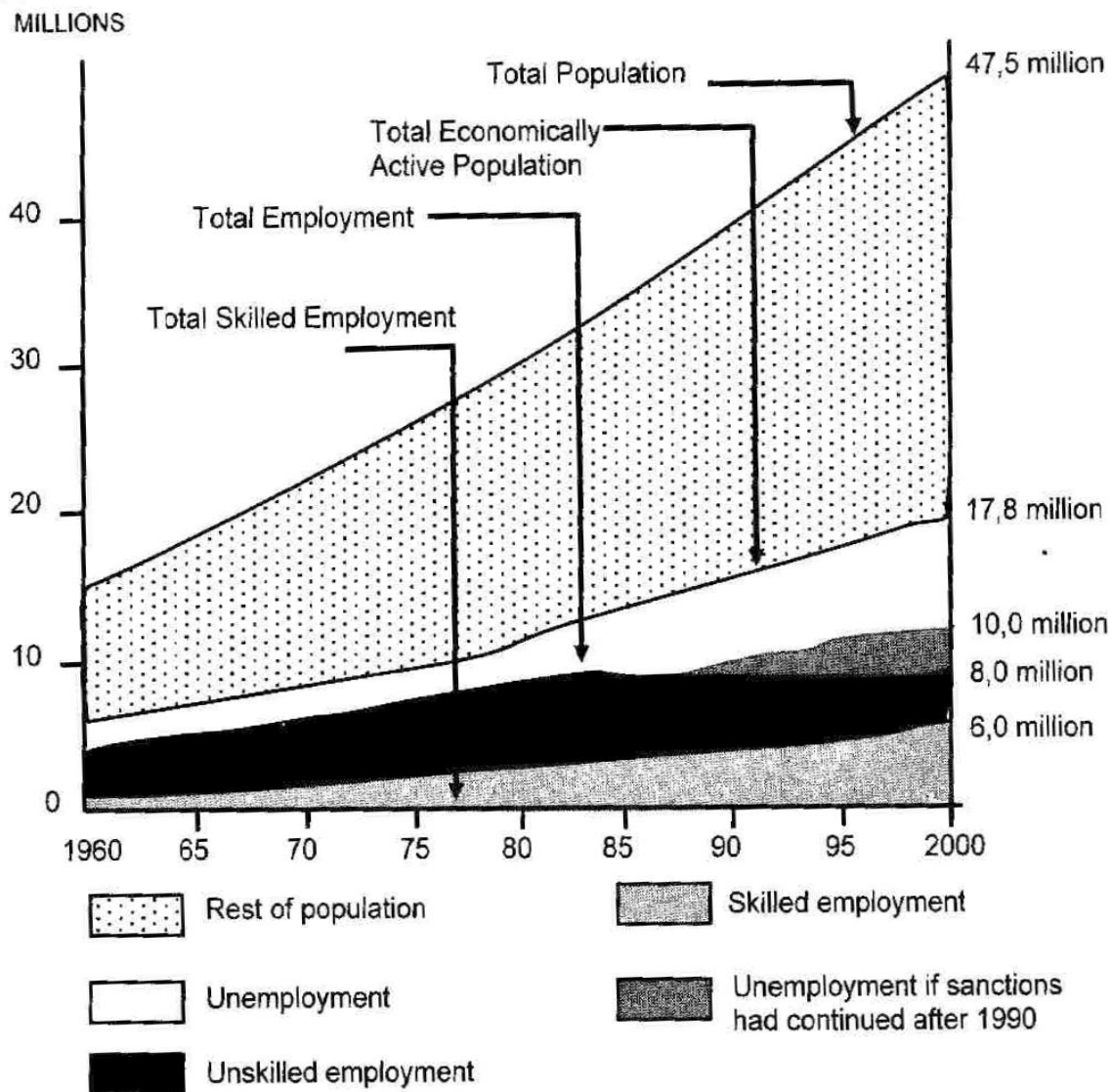
SOURCE: National Manpower Commission

3.1   The graph shows that many people were unemployed in 1995:

3.1.1   Calculate the number of people who will be unemployed in 2000.   (1 x 2) (2)

3.1.2   Give the total population of South Africa for 1960.   (1 x 2) (2)

3.2   State briefly what is meant by 'economically active population'   (1 x 2) (2)

3.3   Briefly explain why there was substantial unemployment in 1995.   (2 x 2) (4)

[10]

QUESTION 4:   20 minutes   *(Source: DOE March 2009)*

Study the figures below, which show imports and exports and then answer the questions that follow:

IMPORTS (R million)		EXPORTS (R million)	
	1995		1995
Food	5 102	Food	7 505
Inedible raw materials	3 838	Metal ores	4 643
Chemicals	12 323	Chemicals	6 997
Textiles	2 815	Diamonds, excluding industrial	
Metal and metal products	3 636	diamonds	9 936
Machinery	31 473	Metal & metal products	15 649
Motor vehicles	11 441	Machinery & transport equipment	8 292
Other manufacturing goods	18 201	Other	28 097
Unclassified	9 785	**TOTAL**	**81 219**
TOTAL	**98 614**	Gold Export value	20 178

4.1.1 What is meant by the term "balance of trade"?   (1 x 2) (2)
4.1.2 With reference to the table above, discuss the importance of gold for
       the balance of trade.   (1 x 2) (2)
4.1.3 Discuss the importance of gold in the balance of trade by making use of
       the above figures.   (3 x 2) (6)

4.2   South Africa hosted the 2010 World Cup soccer finals. There were many
       ways in which South Africa benefitted. Use what you have read and the
       knowledge obtained from the World Cup to answer the following questions.

4.2.1 Name the two services that benefitted from hosting the World Cup?   (2 x 2) (4)
4.2.2 Unemployed people from the townships found jobs during this period
       of time. Suggest three occupations that had to employ more people prior
       to the games being held.   (3 x 2) (6)
4.2.3 Suggest three positives for South Africa in the years that follow the World
       Cup.   (3 x 2) (6)
4.2.4 The World Cup was held in June/July. Why was this an even bigger
       bonus for South Africa?   (2 x 2) (4)
                                                                                              [30]

TOPIC 2: GLOBALISATION AND TRADE. FOOD SECURITY IN SOUTHERN AFRICA

QUESTION 1:   8 minutes   *(Source: DoE November 2009)*

Read the extract below and answer the questions that follow:

1.1   Explain the term "food security".   (1 x 2) (2)
1.2   Explain how drought leads to food shortages.   (2 x 2) (4)
1.3   What sort of wild foods might hungry rural people eat? Can you
       suggest any disadvantage of eating wild foods?   (3 x 2) (6)
1.4   Suggest why small-scale farmers are more vulnerable to climate
       change than large-scale commercial farmers.   (2 x 2) (4)
                                                                                              [16]

QUESTION 2:   **10 minutes**   *(Source: DoE March 2009)*

Read the two extracts, below, and then answer the questions that follow:

Climate change threatens food security in southern Africa

Climate change has led to a drastic drop in agricultural production in Malawi and other Southern African countries. This is the conclusion of delegates at the December 2005 conference on climate change. Lands Secretary George Mkondiwa of Malawi says that Malawians are no longer able to feed themselves. 'Many people are surviving on wild foods and half the population faces starvation and needs food aid'

In southern Zambia, the food crises has hit, and 400 000 villagers are starving. At the moment Zambia is importing maize, the country's staple food, from its South African neighbour.

Small-scale farmers in countries such as Mozambique, Zimbabwe, Malawi and Zambia are more affected by the periodic droughts than large-scale commercial farmers. 'And it's not just climate change that causes food insecurity in Africa,' says a Nigerian professor, "African countries are facing a lot of problems.'

Source: Based on a report by Singy Hanyona, Environment News Service

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South Africa produces more GM crops

Agri-SA is positive about GM crops and is enthusiastic about the contribution they can make in the future towards increased production. GM crops will help emerging farmers to farm under difficult conditions.

So far 14,7 million metric tons of GM maize at a value of R21,6 billion has been produced. The most popular GM-trait was Bt insect resistant maize, for which field trials are underway

Adapted from www.southafrica.info (Michael Appel, February 2008)

2.1	Explain the term "GM food".	(2 x 2) (4)
2.2	How can GM crops contribute to food security?	(2 x 2) (4)
2.3	If GM crops produce good yields, who is more likely to be enthusiastic: the farmer or the consumer? Give a reason for your answer.	(2 x 2) (4)
2.4	In poor communities, if GM maize is cheaper than non-GM maize, which are people likely to buy? Give a reason for your answer.	(2 x 2) (4)

[16]

SECTION B: SOLUTIONS SECTION A

TOPIC 1

QUESTION 1

1.1 Comparison of value of imports compared to value of exports. √√ (1 x 2) (2)

1.2 Agriculture production means that we do not have to import food√√
Agricultural products can earn revenue when exported√√
Agricultural goods can be processed and then exported√√
Goods exported are sold in dollars earning South Africa revenue√√ (4 x 2) (8)

1.3 South Africa needs to import less oil in particular√√
South Africa needs to process more of its own raw materials before exporting√√
Beneficiation will not only earn higher prices but also create more jobs√√ (3 x 2) (6)

[16]

QUESTION 2

2.1 Trade surplus√√ (1 x 2) (2)
2.2 Gross domestic product√√ (1 x 2) (2)
2.3 Policy 21√√ (1 x 2) (2)

[6]

QUESTION 3

3.1.1 7,8 million√√ (1 x 2) (2)
3.1.2 15 – 16 million√√ (1 x 2) (2)

3.2 People that are capable of working. They are in the age group 16
to 64 years of age. √√ (1 x 2) (2)

3.3 Large unskilled population√√
The former homelands of South Africa were now included in statistics of
South Africa√√
Many laws such as pass laws had been removed and large numbers of
unemployed people had moved to the cities. (2 x 2) (4)

[10]

QUESTION 4

4.1.1 Comparison of the value of Imports compared to value of Exports√√ (1 x 2) (2)
4.1.2 Gold is very important as an export as it helps to offset cost of imports√√ (1 x 2) (2)
4.1.3 Gold is the single most important export√√
Gold's contribution fluctuates depending on exchange rate√√
and gold prices√√ (3 x 2) (6)
4.2.1 Hotels√√ / taxi's√√ / etc. (2 x 2) (4)
4.2.2 Security √√ construction √√ transport √√ (3 x 2) (6)
4.2.3 Upgraded infrastructure√√ more foreign visitors√√ foreign investment√√ (3 x 2) (6)
4.2.4 It was winter√√ hotels are normally empty thus there were extra capacity√√ (2 x 2) (4)

[30]

TOPIC 2

QUESTION 1

1.1 Food security is a reliable supply of food for a country and its citizens√√ (1 x 2) (2)

1.2 Crops fail because of no rainfall and water shortages√√
As a result, there is no harvest or only a small harvest√√ (2 x 2) (4)

2.3 Wild food will include berries, pods, roots, insects, lizards, snakes, birds and small mammals√√. Disadvantages are:
Some wild plant foods are poisonous√√
Some of these foods are unpalatable (not nice to eat) √√
Biodiversity is threatened√√ (3 x 2) (6)

1.3 Small-scale farmers don't have irrigation systems and are dependent on rainfall or water from rivers√√
They usually are subsistence farmers and so they have little or no other income to see them through the hard times√√ (2 x 2) (4)

[16]

QUESTION 2

2.1 GM foods are food produced from genetically modified crops√√
They are plants that carry foreign genes to make them insect-resistant or drought-tolerant√√ (2 x 2) (4)

2.2 GM crops can make it easier to grow crops under difficult conditions√√ such as drought or insect attack, leading to increased food supplies√√ (2 x 2) (4)

2.3 The farmer will be happier√√ as he or she will want to produce the largest, best quality crop that will fetch the best price. The consumer is more likely to worry about any negative effects of eating GM food. √√ (2 x 2) (4)

2.4 The GM maize√√ poor people will want best value for money, rather than worry about the way in which it was produced√√. (2 x 2) (4)

[16]

SECTION C: HOMEWORK

QUESTION 1   *(Source: DoE March 2009)*

1.1   Many rural households cannot afford to build their own houses and rely
   on government to provide them with low-cost housing. Refer to Figure 1.

A slum in the capital city of the Democratic Republic of Congo, Kinshasa.
        Figure 1

1.1.1   What is low-cost housing?   (1 x 2) (2)
1.1.2   What do people who do not get low-cost housing, use for homes?   (1 x 2) (2)

1.2   The people in Figure 2 on the following page are protesting.

Figure 2

1.2.1 What are they protesting about?   (1 x 2) (2)
1.2.2 Who do they blame for this problem?   (1 x 2) (2)
1.3   Promises that the problem you identified in question 1.2.1 would be sorted
       out were made to the local community.
1.3.1 Why are promises like this made?   (1 x 2) (2)
1.3.2 Give TWO reasons why it is important that these promises are kept?   (2 x 2) (4)
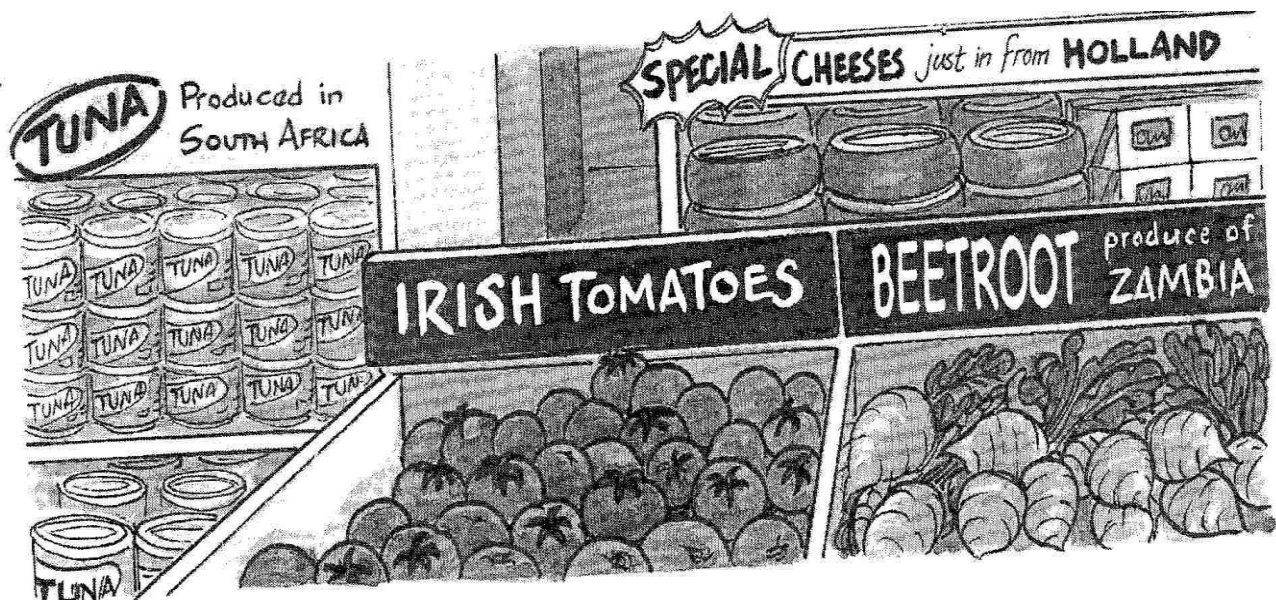

Figure 3

Refer to Figure 3 on the previous page, which shows a global supermarket.

1.4.1   Name the countries that food in Figure 3 comes from.   (4 x 2) (8)

1.4.2   Why does the food in the supermarket in Figure 3 come from all over the world?   (1 x 2) (2)

1.4.3   Explain why companies buy goods from places all over the world?   (1 x 2) (2)

1.4.4   Why do multinational companies have offices all around the world?   (1 x 2) (2)

1.5   Some people have different opinions about globalisation. Refer to Figure 4 (a) and (b) which outline the opinions of Paul Hellyer and Nelson Mandela about globalisation.

Globalisation is really a code name for corporatisation. It's an attempt by the largest corporations in the world, and the largest banks in the world, to re-engineer the world in such a way that they won't have to pay taxes to fix potholes and to maintain parks, and to pay pensions to the old and handicapped.

(a) Paul Hellyer, former Deputy Minister of Canada expresses his view on globalisation.

Figure 4 (a)
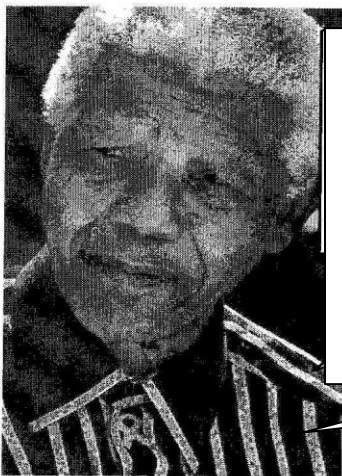
We welcome the process of globalisation. It is inescapable and irreversible. However, if globalisation is to create real peace and stability across the world, it must be a process benefiting all. It must not allow the most economically and politically powerful countries to dominate and submerge the countries of the weaker and peripheral regions. It should not be allowed to drain the wealth of smaller countries towards the larger ones, or to increase inequality between richer and poorer regions.

(b) Nelson Mandela's view on globalisation.

Figure 4 (b)

1.3.1   Refer to Figure 4(a). Paul Hellyer does not like the process of globalisation.
      (a) Give TWO reasons why Paul Hellyer does not like the process of
         globalisation.   (2 x 2) (4)
      (b) Why can multinational companies pay their employees low wages?
                                                                                                                (1 x 2) (2)

1.3.2   Nelson Mandela believes globalisation can have positive effects.
      Refer to Figure 4 (b).
      (a)   Give TWO reasons why Nelson Mandela believes globalisation is
          important for South Africa.   (2 x 2) (4)
      (b)   Give TWO ways in which Nelson Mandela feels globalisation must
          be managed to ensure that it benefits everyone.   (2 x 2) (4)

1.5.3   Do more or less economically developed countries control the process of
      globalisation?   (1 x 2) (2)
1.5.4   Give a reason for your answer to question 1.5.3.   (1 x 2) (2)
                                                                                                                    [46]

QUESTION 2   *(Source: DoE March 2008)*

Read the extract below and answer the questions that follow:

South Africa has increased its trade links with China and in now one of china's biggest trading partners in Africa. Tow-way trade between the two countries has increased from $800 million in 1998 to $11,2 billion in 2007. The industrial and Commercial Bank of China is buying a 20% share in Standard Bank and Sasol will be developing coal-to-oil plants in China.

Although the balance of trade between China and Africa is more or less equal. South Africa is experiencing trade imbalances: its imports in 2007 were R49,1 billion and its exports were R23,7 billion. The strengthening economic ties with China have had an uneven impact on certain sectors of the South African economy. While there has been a large increase in exports of South African agricultural products, there have been severe cuts in the clothing and textile industry. As part of the improved trade relations, China has now imposed some one-way restrictions on its clothing and textile exports.

Adapted from an article by Chris Alden in "China Brief", June 2008"

2.1   Briefly explain why the increased trade links between South Africa and
      China are an example of globalisation.   (1 x 2) (2)
2.2   By how much has the trade value between the two countries increased in
      about 10 years – approximately 5 times, 10 times or 15 times?   (1 x 2) (2)
2.3   A trade deficit is the difference between income from exports and costs of
      exports. Calculate South Africa's trade deficit with China in 2007.   (1 x 2) (2)

2.4 A lot of clothing has been imported from China more cheaply than it can be made in South Africa. Suggest a negative effect of this on workers in the clothing manufacturing industry

2.4.1 in China (1 x 2) (2)

2.4.2 in South Africa (1 x 2) (2)

2.5 Suggest TWO ways of addressing the negative impact of Chinese exports on the clothing industry in South Africa. (2 x 2) (4)

[14]

QUESTION 3 *(Source: DoE November 2008)*

Read the information provided by the Northern Cape Department of Agriculture about its food security support programme and answer the questions that follow:

Who are the target beneficiaries?

Women, children, youth, HIV/Aids infected and affected people, child-headed households

How do I qualify for food support?

Interested parties or individuals must have identified land for farming or have household space for growing vegetables.

Kind of support

- Development of infrastructure – irrigation systems
- Development and upgrading of fencing projects
- Input supplies
  - for vegetable production: seeds and seedlings, compost, fertiliser, garden tools
  - for poultry production: chicks, chicken feed, medicine
  - for small stock production: sheep or milk goats, feed starter pack

3.1 Define 'food security'. (1 x 2) (2)

3.2 Give a reason for the choice of target beneficiaries of the programme. (1 x 2) (2)

3.3 Is Northern Cape Province a rich or poor province? Give ONE reason for your answer. (2 x 2) (4)

3.4 Describe TWO main ways in which this programme aims to prevent or reduce food insecurity. (2 x 2) (4)

3.5 Water is scarce in the Northern Cape.

3.5.1 List TWO sources of water for growing vegetables. (2 x 2) (4)

3.5.2 Suggest TWO ways of conserving water. (2 x 2) (4)

[20]

SECTION D: SOLUTIONS TO HOMEWORK

QUESTION 1

1.1.1 Housing that is built by the government for people who cannot afford to buy or build their own homes. √√ (1 x 2) (2)

1.1.2 People use anything they can find: metal sheeting, cardboard or waste√√ (1 x 2) (2)

1.2.1 They are protesting about a lack of housing√√ (1 x 2) (2)

1.2.2 They blame the government and the local municipality. √√ (1 x 2) (2)

1.3.1 To encourage people to vote for a political party√√ (1 x 2) (2)

1.3.2 (Any TWO)
People expect to receive housing√√ people will protest if promises are not delivered√√can lead to political unrest and blame/ people feel cheated if promises are not kept (2 x 2) (4)

1.4.1 South Africa√√ Ireland √√ Netherlands √√ (or Holland) and Zambia√√

(4 x 2) (8)

1.4.2 The global economy is interconnected and global trade is easy√√ (1 x 2) (2)

1.4.3 Some countries may be cheaper than others√√ some countries may provide better quality than others (1 x 2) (2)

1.4.4 They will base their offices wherever they can get cheap labour and/or resources√√ (1 x 2) (2)

1.5.1 (a) He feels multi-national companies have the power to pay low wages√√ and escape regulations in their own countries√√ (2 x 2) (4)

(b) They can threaten to move their offices to another country if workers don't accept the lower wages. √√ (1 x 2) (2)

1.5.2 (a) It can create real peace and stability√√ and it should allow wealth sharing√√. (2 x 2) (4)

(b) Powerful country must not dominate the process√√ and the wealth of smaller countries should not be drained. √√ (2 x 2) (4)

1.5.3 More economically developed countries control the process of globalisation. √√ (1 x 2) (2)

1.5.4 They have the power to bargain with the work forces in less economically developed countries. √√ (1 x 2) (2)

[46]

QUESTION 2

2.1 As it is an example of exchange between countries all over the world and it includes an increase in foreign trade√√ (1 x 2) (2)

2.2 Approximately 15 times√√ (1 x 2) (2)

2.3 The difference in value between a country's visible exports and visible imports √√ (1 x 2) (2)

2.4.1 Workers in China may be poorly paid√√ (1 x 2) (2)

2.4.2 Many workers in South Africa have lost their jobs√√ (1 x 2) (2)

2.5 (Any two) Sign a trade agreement with China that it will limit its clothing exports √√ promote the buying of local clothing products through advertising √√ or the Proudly South African campaign. (2 x 2) (4)

[14]

QUESTION 3

3.1   Food security is a reliable supply of food for a country and its citizens√√   (1 x 2) (2)

3.2   (Any ONE)
The target beneficiaries are more at risk of experiencing food insecurity√√
While men are often the breadwinners, women and children often don't
have a source of income.
Child-headed households often have no source of income   (1 x 2) (2)

3.3   Poor√√.
(any one of the following)
It is an arid area√√ it has no major cities   (2 x 2) (4)

3.4   (Any TWO)
Encouraging people to grow their own food or produce their own supply of
eggs, milk or meat√√
Supporting rural development schemes by providing supplies and
equipment√√
Creating employment opportunities or ways of generating income   (2 x 2) (4)

3.5.1   Sources include: the Orange River √√ (for those people living in its vicinity)
and groundwater√√ (which is pumped from boreholes)   (2 x 2) (4)

3.5.2   (Any TWO)
Collecting and storing rainwater run-off from roofs in rainwater tanks√√
Mulching the soil to reduce evaporation√√
Not using groundwater faster than it is replaced
Using grey water (from the bath or washing up) in the garden   (2 x 2) (4)

[20]

TOPIC: EXAMINATION PAPER 1: THEORY

! **Teacher Note:** Please inform learners that Paper 1 will have four questions and they must choose **THREE** out of the four questions. It is very important that they know not to do all four in the examination, as only the first 3 questions will be marked. The learners MUST be able to cross-reference the annexure to the questions.

SECTION A: TYPICAL EXAM QUESTIONS FOR PAPER 1

55 minutes   *(Source: DoE Various papers from 2008, 2009 and 2010)*

SECTION A: WEATHER AND CLIMATE, FLUVIAL PROCESSES AND STRUCTURAL LANDFORMS

! **Teacher Note:** The diagrams required for the following questions appear after the questions, on **pages 19-27**.

QUESTION 1

1.1   Indicate if the following is TRUE or FALSE. Write only the question number and 'true' or 'false'. (e.g. 1.1.1 true).

1.1.1   A temperature inversion in a valley will lead to an increase level of smog formation

1.1.2   The Coriolis force causes air to be deflected to the left in the Southern Hemisphere, and to the right in the Northern Hemisphere.

1.1.3   The ITCZ is a zone of High Pressure found in the equatorial regions, characterised by uplifting air and increased rainfall.

1.1.4   Deforestation causes an increase of carbon dioxide in the atmosphere, and is one of the contributors to global warming.

1.1.5   Tropical cyclones move east to west and mid latitude depressions move west to east in both hemispheres.   (5 x 2) [10]

1.2   Indicate which one of the terms in brackets is correct. Write only the question number and chosen answer. (e.g. 1.2.1 west).

1.2.1   A delta is found at the mouth of river systems where material is deposited, causing the river to break up into (tributaries/distributaries).

1.2.2   Impermeable rock will lead to an (increased /decreased) amount of river run-off in a drainage basin.

1.2.3   There is a (larger/smaller) amount of suspended river load in the upper course than in the lower course of a river.

1.2.4   River capture can lead to the (rejuvenation / abstraction) of a river system resulting in the formation of incised meanders.

1.2.5   A flow hydrograph in an (urban / rural) area will have a shorter lag time.

(5 x 2) [10]

1.3   Refer to Figure 1.3 showing the seasonal migration of pressure belts over southern Africa in January and July.

1.3.1   Describe the differences in the position of the HP and LP cells as shown in Figure 1.3 for January and July respective   (2 x 2) (4)

1.3.2   Give a reason why this seasonal movement of pressure belts occurs.   (1 x 2) (2)

1.3.3   How does this movement affect the weather of the SW Cape?   (1 x 2) (2)
                                                                                      [8]

1.4   Refer to Figure 1.4 showing an urban area. The building of such an urban area results in it experiencing very different climatic conditions compared to those in a rural area.

1.4.1   Describe ONE way the climate of an urban area will differ from that of a rural area.   (1 x 2) (2)

1.4.2   Explain THREE reasons why an urban climate differs from that of a rural area.   (3 x 2) (6)

1.4.3   As a member of a management committee responsible for looking into urban problems, write a report (of no more than 12 lines) in which you explain:
        (a) Why these changes in the urban climate are a concern to you,
        (b) What plan of action you suggest to deal with these problems.   (6 x 2) (12)
                                                                                      [20]

1.5   Refer to Figure 1.5 showing the features of a mid-latitude cyclone or depression.

1.5.1   Describe where these systems form in the Southern Hemisphere.   (1 x 2) (2)

1.5.2   Describe how these weather systems form.   (2 x 2) (4)

1.5.3   Describe the type of weather that is associated with a cold front.   (2 x 2) (4)

1.5.4   (a)   What is the name given to the dying out or dissipating stage of this system?   (1 x 2) (2)

        (b)   Draw the symbol to show how this stage of the system would be shown on a synoptic chart.   (1 x 2) (2)
                                                                                      [14]

1.6   Refer to Figure 1.6 (a) and (b) showing flow hydrographs and drainage patterns.

1.6.1   Identify the drainage pattern shown by river system A.   (1 x 2) (2)

1.6.2   Which of the flow hydrographs X or Y will show the river discharge measured at point D in river system A? Give a reason for your answer.   (2 x 2) (4)

1.6.3   Identify the drainage pattern shown by river system B.   (1 x 2) (2)

1.6.4   Which of the flow hydrographs X or Y will show the river discharge measure at point E in river system B? Give a reason for your answer.   (2 x 2) (4)

1.6.5   (a)   Explain why measuring discharge is an important part of catchment management of a river system.   (1 x 2) (2)

        (b)   Suggest TWO other methods of catchment management and why they need to be done.   (2 x 2) (4)
                                                                                      [18]

1.7   Refer to Figure 1.7 showing different types of landforms features.

1.7.1 Name the landform features labeled A and D respectively.   (2 x 2) (4)

1.7.2 Name the two slope types labeled 2 and 3 respectively, which form
        part of landform feature A.   (2 x 2) (4)

1.7.3 Name the landform feature labeled E and describe how it is formed.
                                                                                  (2 x 2) (4)

1.7.4 Describe how the rock structure differs between the area labeled P and Q
        and the area labelled R and P.   (2 x 2) (4)

1.7.5 Suggest one reason for the formation of the rock structure found between
        P and Q.   (1 x 2) (2)

1.7.6 Draw a sketch of landform feature D in your answer book. Label the scarp
        and dip slope on your sketch.   (1 x 2) (2)

1.7.7 Choose any ONE of the landform features A, C or D. State which one you
        have chosen and describe one way in which this landform affects human
        activities.   (1 x 2) (2)
                                                                                      [22]

QUESTION 2

2.1   Choose the correct term that matches each of the following statements. Write down
        only the question number and the chosen term.

2.1.1 The process of moving from a rural to an urban area.
2.1.2 An economic activity that involves extracting raw materials from the earth.
2.1.3 The system that involved people from rural areas moving to urban areas only to work.
2.1.4 An economic activity that involves providing a service to people.
2.1.5 The area in a city where people live.
                                                                                (5 x 2) [10]
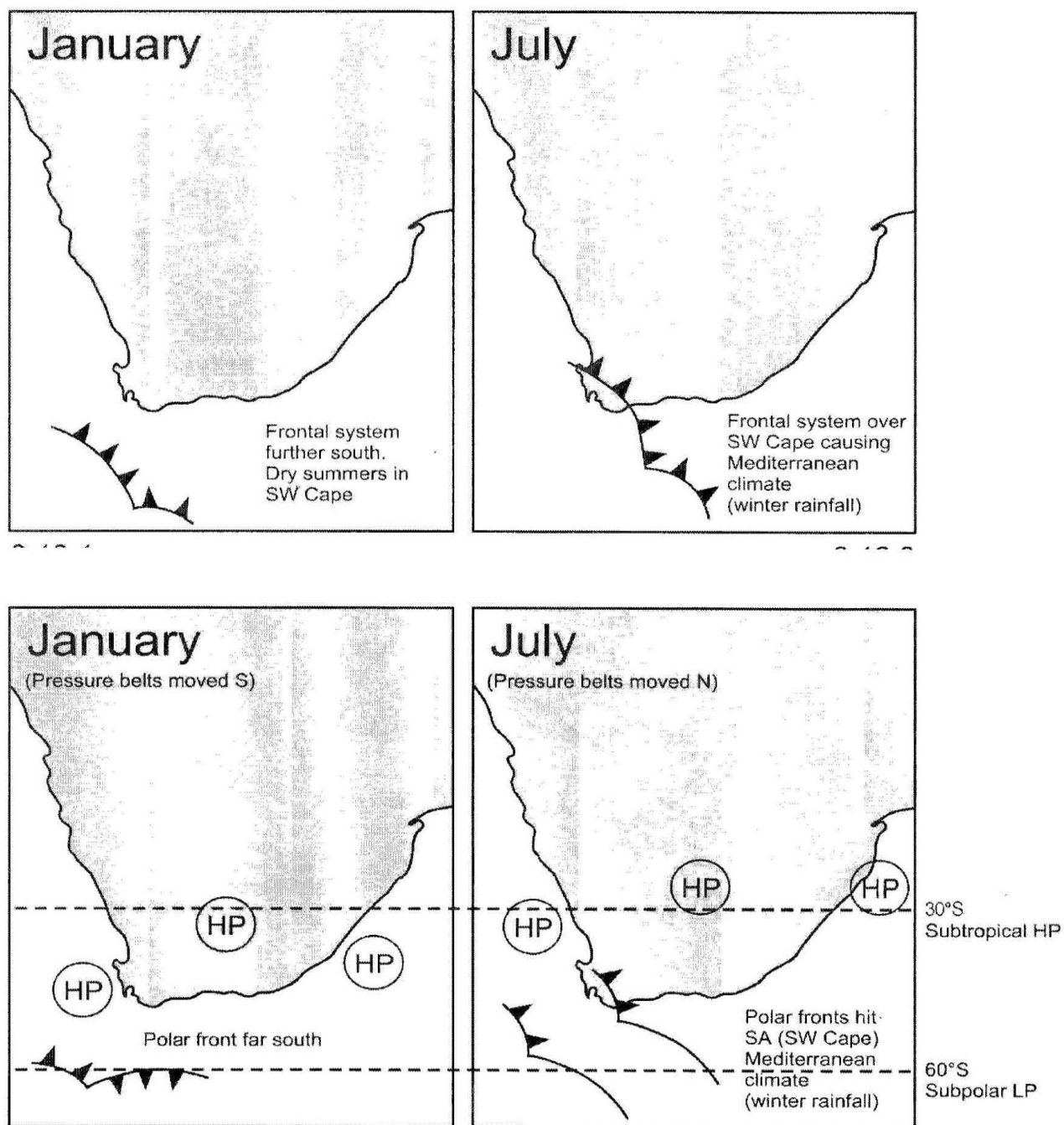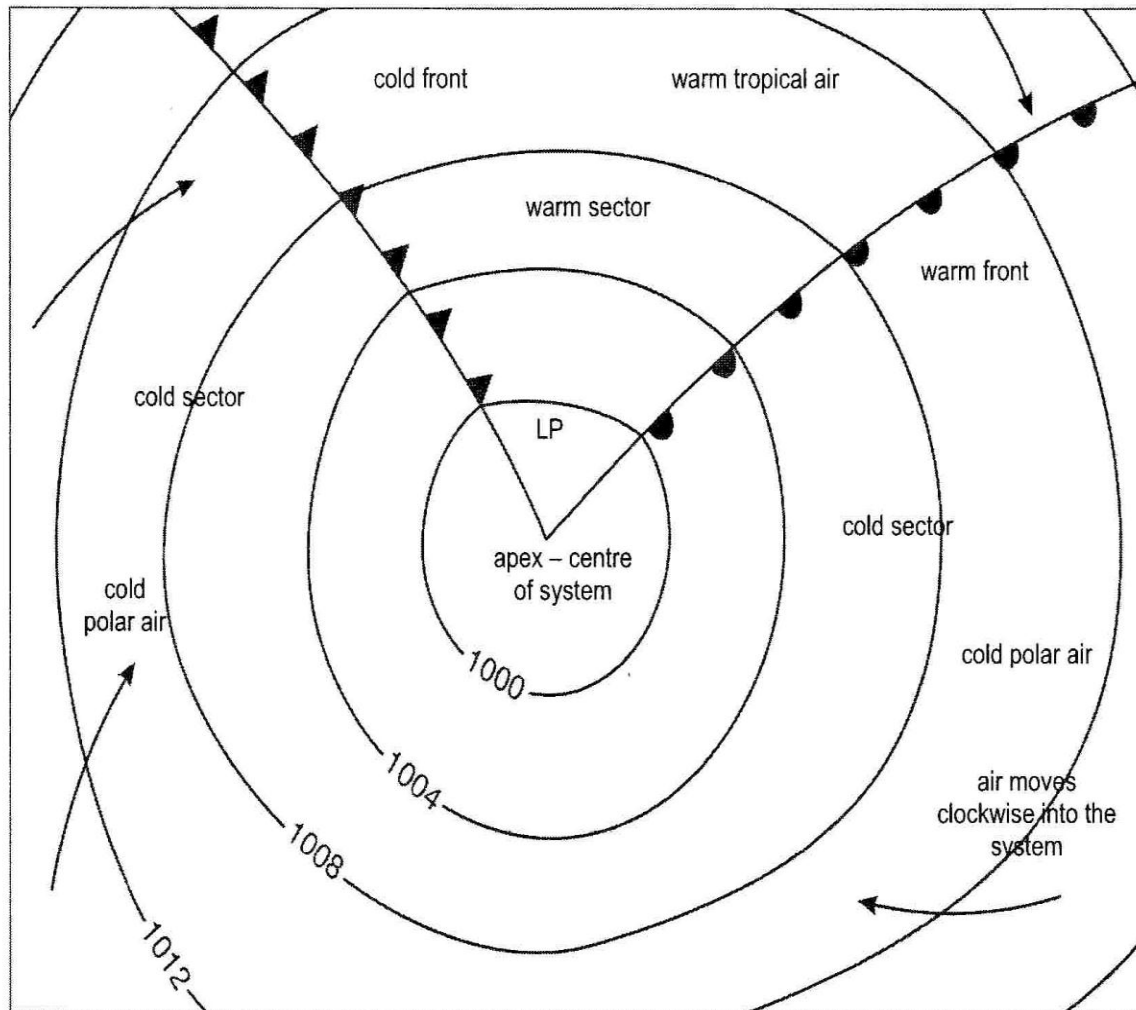
ANNEXURE

Figure 1.3

FIGURE 1.4   An urban area.

Cold front: area which separates the warm air from the cold air behind it. The cold air undercuts the warm air. This forces the warm air to rise steeply and to form clouds.

Warm front: area which separates the cold air from the warm air behind it. The warm air overtakes the cold air and rises at a gentle angle to form clouds.

Cold sector: area of cold polar air.

Warm sector: area of warm tropical air.

Apex of LP: centre of system with the lowest pressure.

FIGURE 1.5 **Features of a mid-latitude cyclone.**
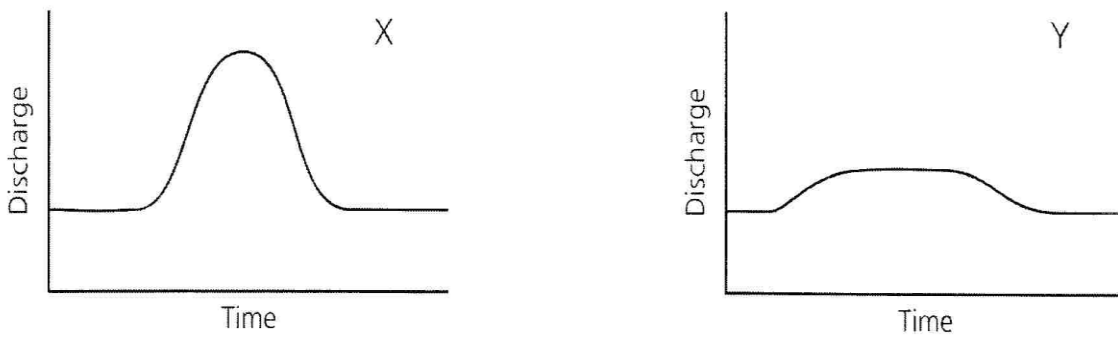
(a) Flow hydrographs
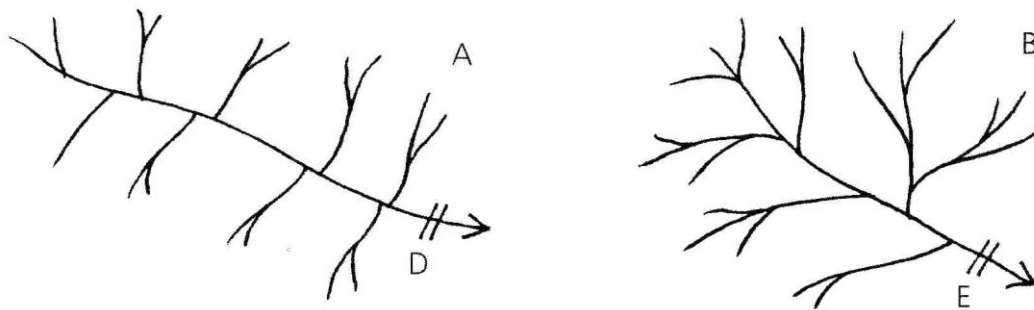
(b) Drainage patterns

FIGURE 1.6 Flow hydrographs and drainage patterns.

FIGURE 1.7 Sketches of different types of landforms.

FIGURE 2.3 **A graph showing how different weather conditions change as a tropical cyclone moves over an area.**

FIGURE 2.4 : **A synoptic chart showing winter conditions over southern Africa.**

Case study: Swift, sudden danger lurks in urban waterways

'All it takes to kill is ankle-deep water or travelling at a brisk walking pace. Under such conditions, adults could lose their footing and be swept downstream,' says civil engineer Chris Brooker. 'They would probably be unable to get to their feet again.'
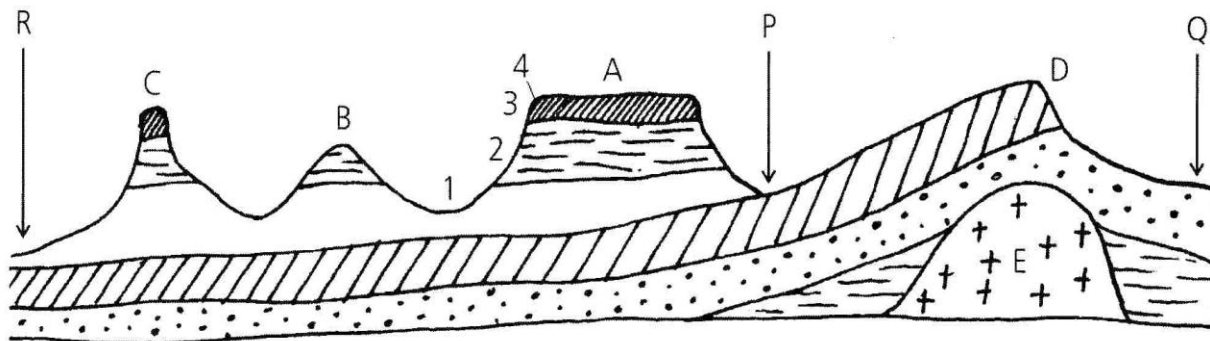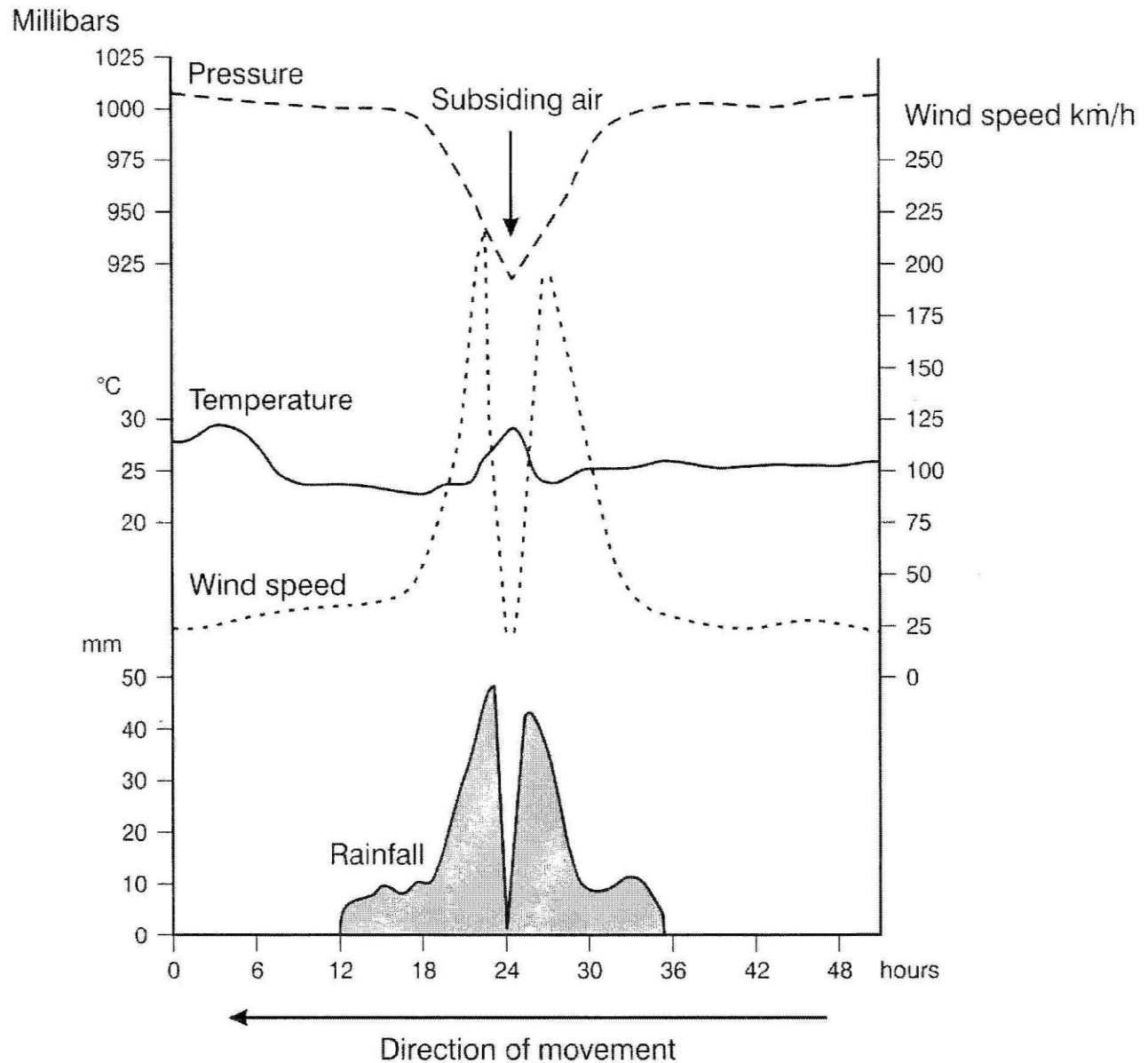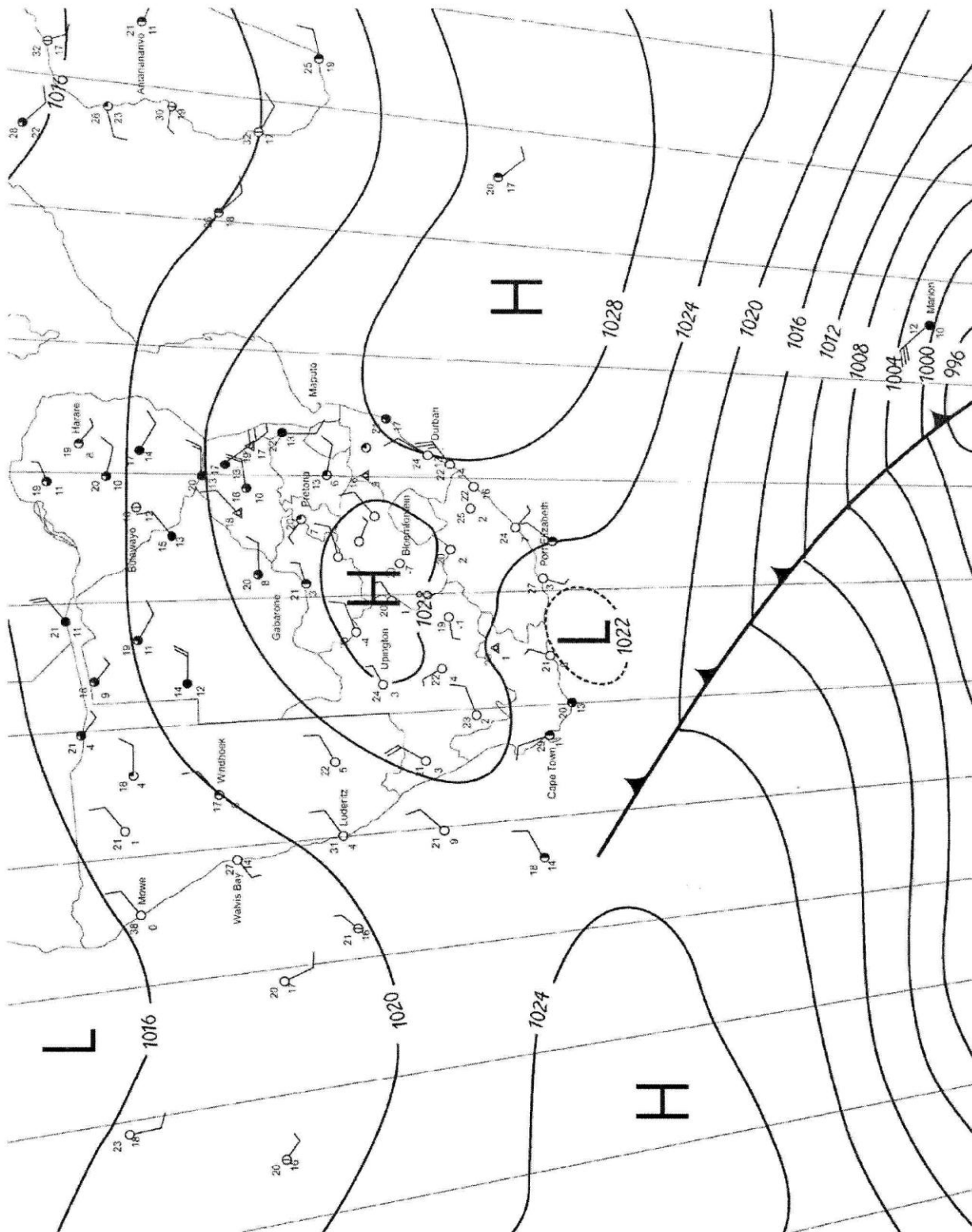
A brisk walking pace is about 3 metres a second. Many of Gauteng's urban waterways, when in flood, travel many times that speed. That is what makes them so dangerous and why it is that countries around the world are trying to prevent urban flash flooding.

But preventing a flash flood is difficult, say the experts, and to do so takes money, time and a lot of urban planning.

Rapid urbanisation in Johannesburg has brought with it more roads and pavements. This has increased the amount of rain run-off, which is usually absorbed by soil and vegetation.

Over the years, countries have slowly begun to address the issue. In the United States there is legislation that says no development that is likely to increase flooding is allowed. A shopping centre, for example, would have to have a containment area, like a storage dam. Brooker believes that Johannesburg has lagged behind. Controlling flash floods comes down to the use of storage facilities. 'You need something to contain the flood, to store it, so that you can accumulate water and then slowly release it,' explains Brooker.

Dams and weirs are often used for this task. A sports field can also be used to hold water temporarily. Another option is to turn to nature by rehabilitating rivers and making use of wetlands. 'Slow the river down with vegetation trees and rocks,' says Brooker.

But the cheapest and most effective way of reducing drownings is through education. 'It becomes a signage issue – a sign showing that there is a danger that you will drown if you cross this river. Putting up fences also prevents people from crossing rivers. Simply, it means letting people know that they must not stand in moving water,' says Brooker.

(Source: Adapted from *The Star*, 28 September 2005)

Warning sign at Bruma Lake.

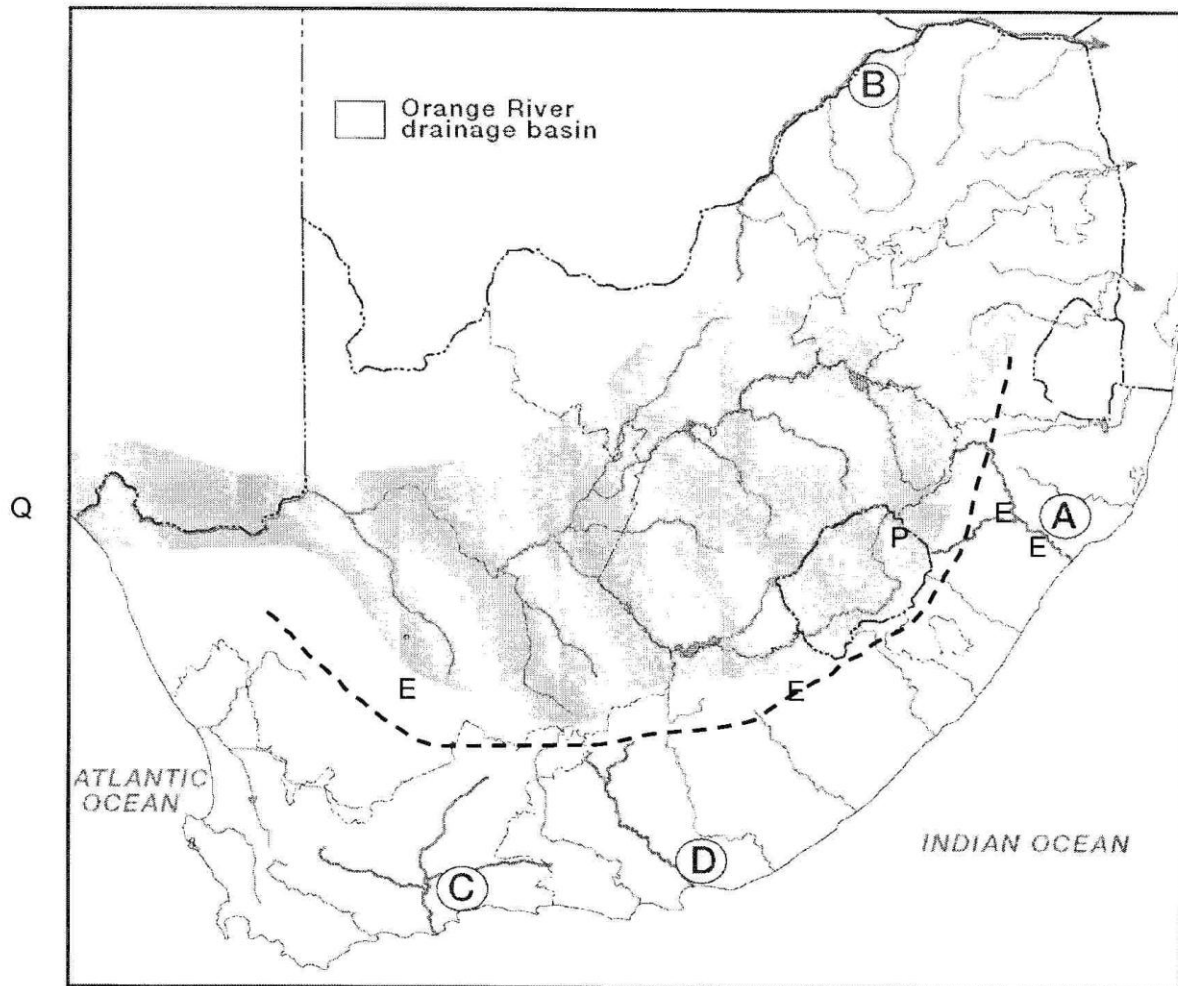**Figure 2.5.   A case study on climatic hazards in urban areas.**

FIGURE 2.6 A map of South Africa' drainage basins showing the Orange River drainage basin.
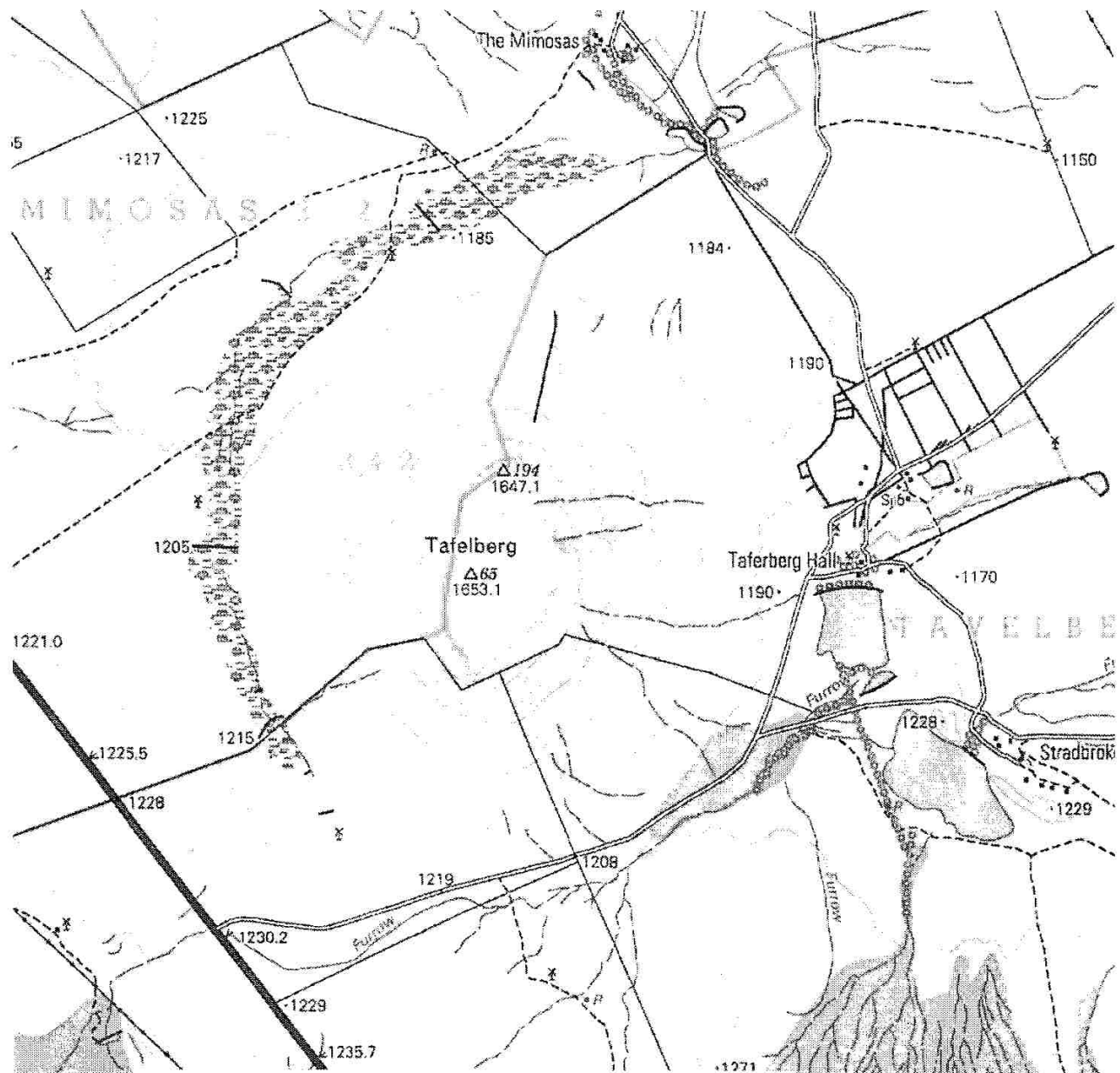
FIGURE 2.7   Part of a 1 : 50 000 topo map of Tafelberg.

SECTION B: SOLUTIONS SECTION A

QUESTION 1

1.1.1 True√√   1.1.4 True√√
1.1.2 True√√   1.1.5 True√√
1.1.3 False√√

(5 x 2) **[10]**

1.2.1 distributaries√√   1.2.4 rejuvenation√√
1.2.2 increased√√   1.2.5 urban√√
1.2.3 smaller√√

(5 x 2) **[10]**

1.3.1 January the HP and LP areas are found further south√√
     July – they are found further north – the HP are further north than 30°S√√   (2 x 2) (4)
1.3.2 The thermal equator moves further north and south depending on where
     the sun's direct rays are shining. This means that all the pressure belts
     move as the equatorial LP moves with the sun's rays. √√   (1 x 2) (2)
1.3.3 In the winter months of July the polar fronts move further north and are
     found over the SW Cape causing winter rainfall. √√   (1 x 2) (2)
[8]

1.4.1 (Any ONE)
     Urban areas will have higher temperatures than the rural areas√√
     Increased cloud cover over urban areas, etc   (1 x 2) (2)
1.4.2 (Any THREE)
     Large surface area in urban areas for greater absorption of heat√√
     Material of tar and bricks absorb more heat than grass in rural areas√√
     Little greenery in urban area results in less evaporational cooling√√   (3 x 2) (6)
1.4.3 Ensure that learners formulate full sentences. There should be at least six
     individual facts.
     (a) Cause problems for people's health √√e.g. increased eye irritation, heat
         stress and respiratory problems√√
         Increase smog from more pollution cause problems with visibility√√ and
         so lead to more traffic accidents on the roads√√
     (b) Control urban developments by ensuring more trees and green areas√√
         Control emissions of pollutants from factories through fines√√
         (Any acceptable)   (6 x 2) (12)
[20]

1.5.1 Form between 40° - 60°S of the equator in the sub polar LP cell√√   (1 x 2) (2)
1.5.2 Warm air from the tropics meets cold air from the poles in the LP cell. √√
     Warm air rises up the cold air at the front, which is the meeting place of
     these two air masses. √√   The polar front develops kinks or waves because
     of the different strengths of air movements.   (2 x 2) (4)
1.5.3 Cool√√, cloudy conditions with possible rain√√ and strong winds   (2 x 2) (4)

1.5.4 (a)   occlusion√√   (1 x 2) (2)

occlusion
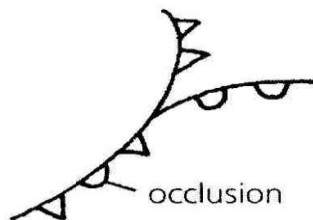
    (b)   √√   (1 x 2) (2)
[14]

1.6.1 Trellis drainage pattern√√   (1 x 2) (2)
1.6.2 Y√√ low peak flow with a steady decline due to short tributaries
of trellis pattern feeding water through at a steady rate√√   (2 x 2) (4)
1.6.3 Dendritic drainage pattern√√   (1 x 2) (2)
1.6.4 X√√ high peak flow with a sudden increase as all the water
in the dendritic pattern arrives at point E at once√√   (2 x 2) (4)
1.6.5 (a)   Can control flooding by being able to measure and predict
flow patterns of rivers. √√   (1 x 2) (2)
    (b)   Ensure urban planners do not build developments too close
to river√√
Ensuring all people living in river area are part of the management
team responsible for river clean ups and conservation of
vegetation on banks of river√√   (2 x 2) (4)
[18]

1.7.1 A – mesa√√
D - cuesta (homoclinal ridge) √√   (2 x 2) (4)
1.7.2 2 - talus√√
3 - scarp√√   (2 x 2) (4)
1.7.3 Batholith of dome√√ intrusion of molten magma, which cools and hardens
to form a large massive igneous rock formation under ground√√   (2 x 2) (4)
1.7.4 P-Q - zone of inclined rock strata where rocks are tilted at an angle√√
R-P – zone of horizontal rock strata where rocks are found in layers√√   (2 x 2) (4)
1.7.5 Intrusion of igneous rock underground has pushed the horizontal strata
up and caused them to tilt at an angle to form an area of inclined strata on
the surface√√   (1 x 2) (2)

1.7.6
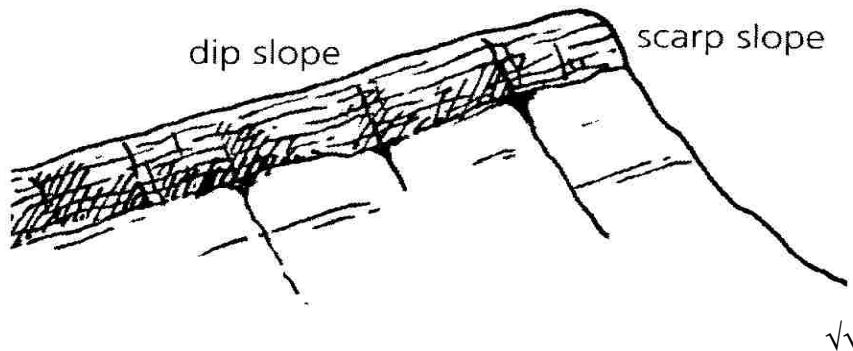
√√   (1 x 2) (2)

Answers depend on choice of landform feature. D- cuesta – ridge of
mountains forms a transport barrier/ difficult to farm and build on steep
scarp slope. √√   (1 x 2) (2)
                                                          [22]

QUESTION 2

2.1.1 Rural-urban migration√√
2.1.2 Primary activity√√
2.1.3 Migrant labour systems√√
2.1.4 Tertiary activity√√
2.1.5 Residential zone√√   (5 x 2) **[10]**

SECTION C: HOMEWORK   (Diagrams on pages 19 - 27)

(Taken from DoE. Various papers from 2008, 2009 and 2010)

QUESTION 1:   5 Minutes

Choose a description from COLUMN B that matches an item in COLUMN A. Write only the
letter (A-G) next to the question number 1.1.1 –1.1.5.

COLUMN A	COLUMN B
1.1 Subtropical HP cell	A a gently dipped slope found in an area of inclined strata
1.2 Eye of a cyclone	B an area of descending air found at 30° N and S of the equator
1.3 Warm sector	C a river meander with two steep slides
	D zone of subsiding air in the centre of a hurricane
1.4 Slip-off slope	E an area of warm tropical air behind the warm front
	F a large area of igneous rock exposed onto the earth's surface by weathering and erosion
1.5 Dome	
	G a gentle slope on a river bend caused by deposition of material

                                                          (5 x 2) [10]

QUESTION 2

State whether the following is TRUE or FALSE. Write only the question number and true or false. (e.g. 2.2.1 true)

2.1   The pediment depicts a concave slope at the foot of a hill where it merges with the valley floor.
2.2   Mass movement is the movement of material down a slope due to various reasons.
2.3   The dip slope is a steeply dipped slope found in an area of inclined strata.
2.4   Convergence is the meeting of air masses in a zone of LP.
2.5   The polar easterlies are the winds that blow from the polar HP to the sub-polar LP.

(5 x 2) [10]

QUESTION 3

Refer to Figure 2.3 which is a graph showing how different weather conditions change as a tropical cyclone moves over an area.

3.1   Name the area of the cyclone shown by the arrow of subsiding air.   (1 x 2) (2)
3.2   Describe and explain the weather conditions associated with this part
        of a tropical cyclone.   (2 x 2) (4)
3.3   Describe the weather conditions that occur as the 1st vortex of a
        tropical cyclone moves over an area.   (2 x 2) (4)
3.4   Explain why these conditions cause problems for people living in coastal
        areas.   (2 x 2) (4)
                                                                                    [14]

QUESTION 4

Refer to Figure 2.4 showing a synoptic chart of winter conditions over southern Africa.

4.1   Give TWO reasons besides the date, that tell you that this synoptic chart
        shows winter conditions.   (2 x 2) (4)
4.2   Describe the weather conditions that Marion island is experiencing.   (2 x 2) (4)
4.3   Explain why the weather conditions you described in 2.4.2 are occurring.
                                                                                    (2 x 2) (4)
4.4   Give a reason why most of the weather stations over South Africa are
        experiencing cloudless conditions.   (1 x 2) (2)
                                                                                    [14]

QUESTION 5

Refer to Figure 2.5: A case study on climatic hazards in urban areas.

5.1   Name any weather system you have studied, that can lead to a 'flash flood'.
                                                                                    (1 x 2) (2)
5.2   In a short paragraph (of no more than 12 lines) discuss methods you would
        introduce in an urban area to deal with the climatic hazard of flash floods. (6 x 2) (12)
                                                                                    [14]

QUESTION 6

Refer to Figure 2.6 showing a map of South Africa's drainage basins. The Orange River drainage basin is outlined and shaded.

6.1   What is meant by a drainage basin?   (1 x 2) (2)
6.2   The Great Escarpment is the major watershed in South Africa. It is indicated
        with a dashed line marked X on the map. Explain what a watershed is.   (1 x 2) (2)
6.3   Is the mouth of the Orange River indicated by the letter P or Q on the map?
        Give a reason for your answer.   (1 x 2) (2)
6.4   The Orange River is described as an exotic river when it flows through
        parts of the Northern Cape. Explain why this is the case.   (2 x 2) (4)
6.5   Name and describe the type of drainage pattern the Orange River forms.   (2 x 2) (4)
6.6   The local community has proposed the construction of a major dam in the
        river system. Write a short essay (no more than 12 lines) to outline the
        advantages and disadvantages of such a proposal.   (6 x 2) (12)
                                                                                                              [26]

QUESTION 7

Refer to Figure 2.7 showing part of a 1: 50 000 topographical map of the Tafelberg area.

7.1   The landform feature called Tafelberg that is shown on the map is an example
        of a landform formed by horizontal strata. Identify this type of landform.   (1 x 2) (2)
7.2   Draw a cross section through the landform identified in 2.7.1 to show
        the characteristics of this landform feature.   (2 x 2) (4)
7.3   On the cross section drawn in question 2.7.2, label the four slope types –
        crest, scarp, talus and pediment.   (4 x 1) (4)
7.4   Mass movement is likely to occur on such a landform. Name and describe
        any one type of mass movement that could occur.   (2 x 2) (4)
                                                                                                              [14]

SECTION D: SOLUTIONS TO HOMEWORK

QUESTION 1

1.1   B√√
1.2   D√√
1.3   E√√
1.4   G√√
1.5   F√√   (5 x 2) **[10]**

QUESTION 2

2.1   True√√
2.2   False√√
2.3   False√√
2.4   True√√
2.5   True√√   (5 x 2) **[10]**

QUESTION 3

3.1   Eye√√   (1 x 2) (2)
3.2   Centre of a hurricane where there is the lowest pressure√√
       Sinking air prevents formation of clouds and rain√√ so it is an
       area of calm, clear conditions   (2 x 2) (4)
3.3   Increase in rainfall over a short period of time√√
       Wind speed increase to hurricane force speeds of over 200km/h√√
       Pressure drops as centre of cyclone approaches
       Temperatures drop as rain cools conditions   (2 x 2) (4)
3.4   Flooding from heavy rain√√ as well as storm surge from rising
       sea levels√√ along the coast. Excessive wind damage to property
       along beaches.   (2 x 2) (4)
                                                                                                    [14]

QUESTION 4

4.1   HP cell over land which is common in winter due to lower level of this system√√
       Cold fronts about to hit Cape Town – further north in winter√√
       Lower temperatures over the land e.g. 20°C   (2 x 2) (4)
4.2   Overcast√√ NW wind√√ 30 knot wind, temperature 12°C, dew point
       temperature 10°C, pressure 1 000hPa (any two)   (2 x 2) (4)
4.3   Cold front is over Marion island causing air to rise and form clouds
       so that is why it is overcast√√
       Temperatures are low due to cold polar air behind front√√
       Strong pressure gradient so winds are 30 knots   (2 x 2) (4)
4.4   HP cell over the interior√√ - air is subsiding causing cloudless conditions
       due to stable air.   (1 x 2) (2)
                                                                                                    [14]

QUESTION 5

5.1   (Any ONE)
       Convectional thunderstorms√√/frontal systems/tropical cyclones   (1 x 2) (2)
5.2   Any six relevant individual facts in paragraph format.
       Concrete and tar in urban areas do not allow infiltration of water to occur, so
       there is an increased surface run-off causing sudden rises in river system
       Move informal settlements away from river banks√√
       People should be taught not to cross rivers during flood periods√√
       People should be warned not to drive on roads that are flooded
       Educate people as to when not to cross rivers or play near rivers√√
       Fencing river banks in urban areas to prevent access√√
       Protecting wetland areas, and preventing urban developments along rivers√√
                                                                                                    (6 x 2) (12)

QUESTION 6

6.1   An area into which a river and its tributaries drain and from where the river
       system gets its water√√   (1 x 2) (2)
6.2   The area of highland separating two drainage basins√√   (1 x 2) (2)
6.3   Q- river flows into the sea – mouth is where a river ends√√   (1 x 2) (2)
6.4   Has source in Drakensberg, which has lots of rainfall√√. Perennial river
       flowing through very dry area so it is exotic to the region√√   (2 x 2) (4)

6.5   Dendritic √√ tree shaped pattern where all the tributaries join the main
trunk√√. Not dependent on the rock structure over which it flows.   (2 x 2) (4)

6.6   **Advantages**
Water can be stored √√
Can be used for household purposes √√
Can be used for irrigation √√
Can be used for industries√√
Infrastructural development √√
Economic advantages √√
Flood control √√
Periodic stream can become permanent √√
Recreational facilities and tourism √√

Disadvantages
Characteristics of the river channel will change √√
Lower reaches of the river may be dry most of the time √√
People living in the lower reaches might not be able to practice crop
farming √√
Flow characteristics of river will also change √√
Displacement of local inhabitants √√
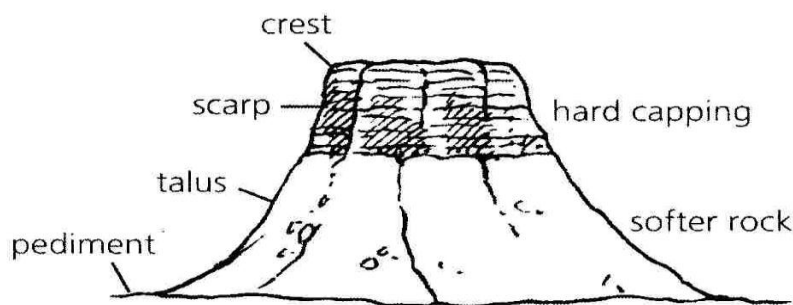Local ecosystems destroyed √√

[Accept other reasonable answers]
[Any **SIX**. Must give advantages and disadvantages]   (6 x 2) (12)
    [26]

QUESTION 7

7.1   Mesa√√   (1 x 2) (2)

7.2
    (2 x 2) (4)
7.3   Labeled on the sketch map   (4 x 1) (4)
7.4   Any one of soil creep / landslides / rock falls√√
    e.g. soil creep on talus slope – slow movement of top layer of soil down the
    slope. √√   (2 x 2) (4)
    [14]

TOPIC: CONSOLIDATION – EXAMINATION PAPER 1

SECTION A: TYPICAL EXAM QUESTIONS

!	**Teacher Note:** The session consists of questions from Paper 1. Please remember that in the examination learners are required to answer **THREE** of the four questions. Please remind the learners that during the examination the figures, graphs etc, will be placed in a separate annexure. They must be able to cross-reference the annexure to the questions.

EXAM PAPER SECTION A: CLIMATE AND WEATHER, FLUVIAL PROCESSES AND STRUCTURAL LANDFORMS

QUESTION 1:   26 minutes   52 marks   *(Source: DoE March 2011)*

1.1   Figure 1.1 illustrates a very specific weather system that can affect the weather along the east coast of southern Africa. Complete the following by filling in the missing word(s). Choose from the list below and write only the word(s) next to the question number (1.1.1 – 1.1.5).
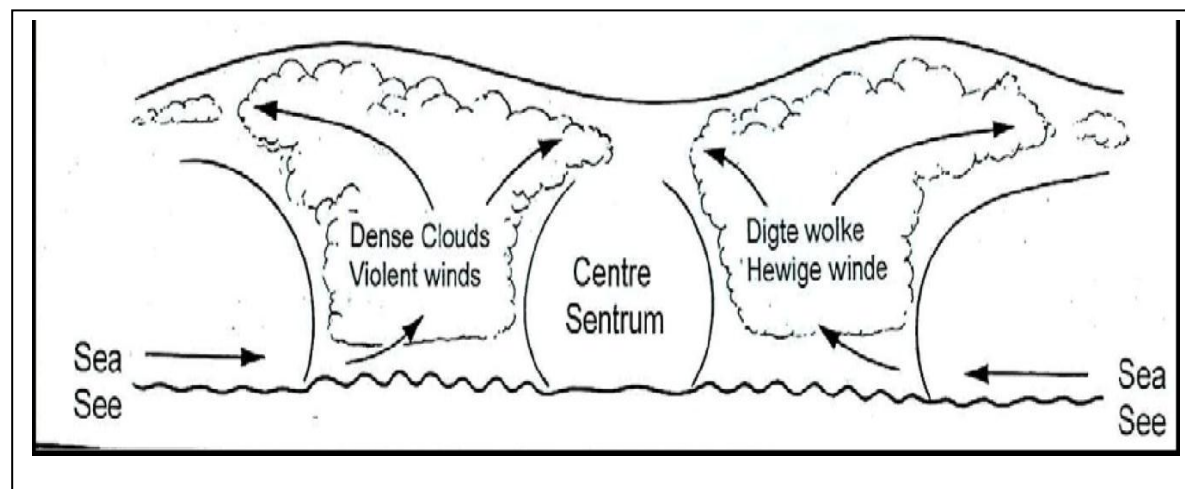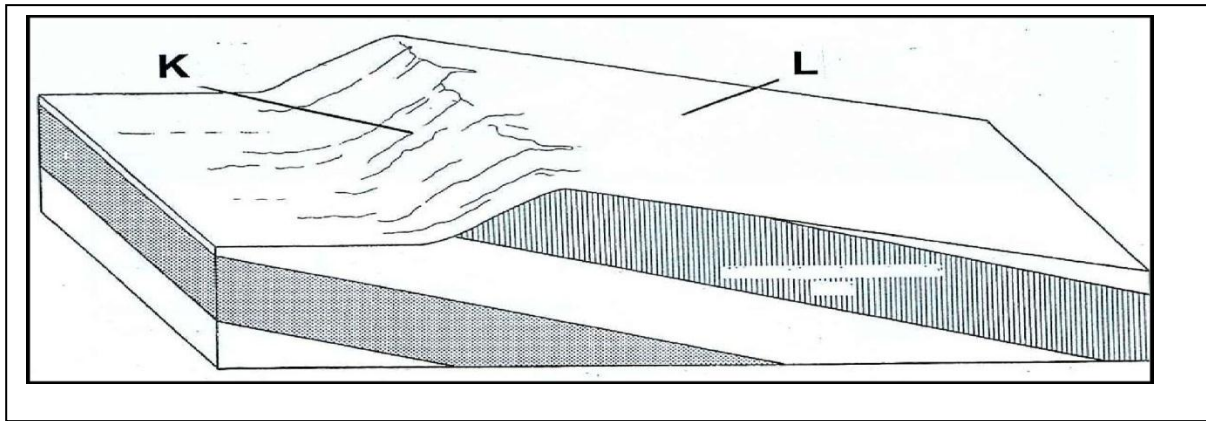

FIGURE 1.1

Cumulonimbus; cumulus; polar front; eye; hurricane strength winds; coastal low pressure; tropical cyclone; thunderstorms; drizzle

1.1.1…	Type of weather system illustrated
1.1.2…	Main cloud type surrounding the centre of this weather system
1.1.3…	Name given to the centre of this weather system
1.1.4…	Type of precipitation associated with this weather system
1.1.5…	Wind associated with this weather system

(5 x 2) [10]

1.2. Refer to Figure 1.2 showing a cross-sectional sketch of a structural landform. Various options are given as possible answers to the following questions. Choose the answer and write only the letter (A- D) next to the question number (1.2.1 – 1.2.5), for example 2.1.6B.

FIGURE 1.2

1.2.1 The diagram shows a cross section through a…

       A   tor
       B   dome
       C   cuesta
       D   batholith

1.2.2 The structural landform develops from…

       A   massive igneous rock
       B   tilted sedimentary rock
       C   horizontal sedimentary rock
       D   folded igneous rock

1.2.3 Slope **K** is known as the ….slope

       A   scarp
       B   dip
       C   debris
       D   vertical

1.2.4   …will most likely take place on slope **L**

        A   rock falls
        B   land slides
        C   slumping
        D   soil creep

1.2.5   The drainage pattern most likely to develop on slope **L** is…

        A   dendritic
        B   trellis
        C   rectangular
        D   radial   (5 x 2) [10]

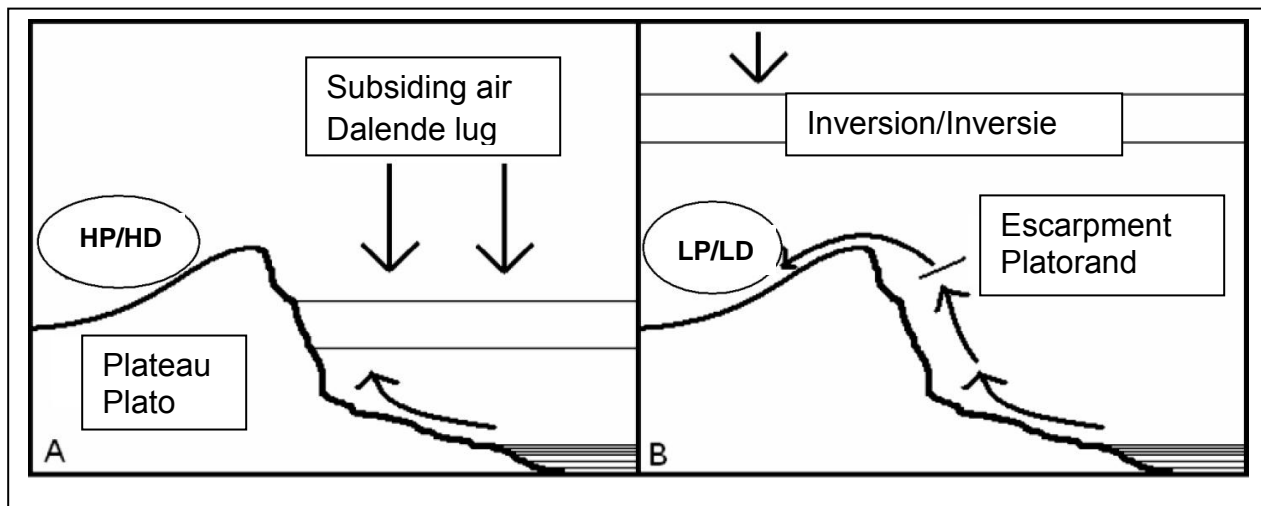1.3   Refer to Figure 1.3 showing the different positions of the upper air inversion layer over South Africa.

FIGURE 1.3

1.3.1   Define the term *temperature inversion*.   (1 x 2) (2)
1.3.2   Name the high-pressure cell that forms over the plateau in sketch A.   (1 x 2) (2)
1.3.3   Explain the origin of the high-pressure system named in
        Question 1.3.2.   (2 x 2) (4)
1.3.4   Explain how the varying positions of the inversion layer, as shown in
        Figure 1.3 in sketches A and B, will influence the amount of rainfall
        received over the South African interior in summer and winter.   (2 x 2) (4)
1.3.5   Discuss how the varying amounts of rainfall over the South African
        interior in summer and winter, will impact on farming activities there.   (2 x 2) (4)
                      [16]

1.4 The following diagram illistrates a typical slope. Study this diagram and answer the questions that follow.
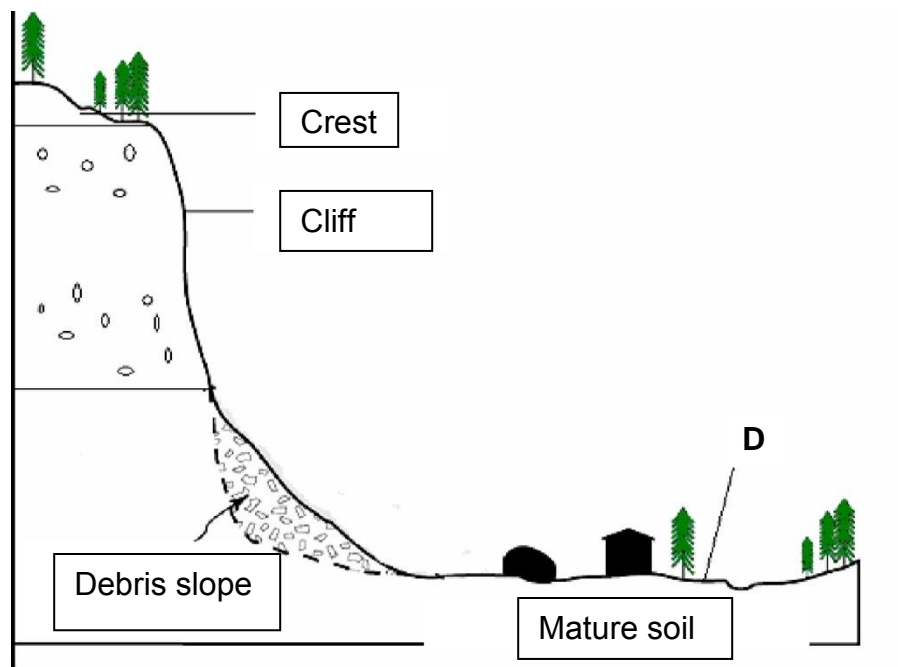
FIGURE 1.4

1.4.1 Describe the shape of the crest. (1 x 2) (2)

1.4.2 Why is the cliff slope so steep? (1 x 2) (2)

1.4.3 Where did the debris fragments on the talus slope come from? (1 x 2) (2)

1.4.4 Name TWO characteristics of the talus slope. (2 x 2) (4)

1.4.5 Name the slope element labelled **D.** (1 x 2) (2)

1.4.6 Suggest why slope element **D** supports the growth of more vegetation than the slope element above it. (2 x 2) (4)

[16]

QUESTION 2:   **28 minutes**   **56 marks**   *(Source: DoE March 2011*)

Figure 2.1 illustrates a large industrial city that developed on a valley floor.
Air movement occurs along the slopes.
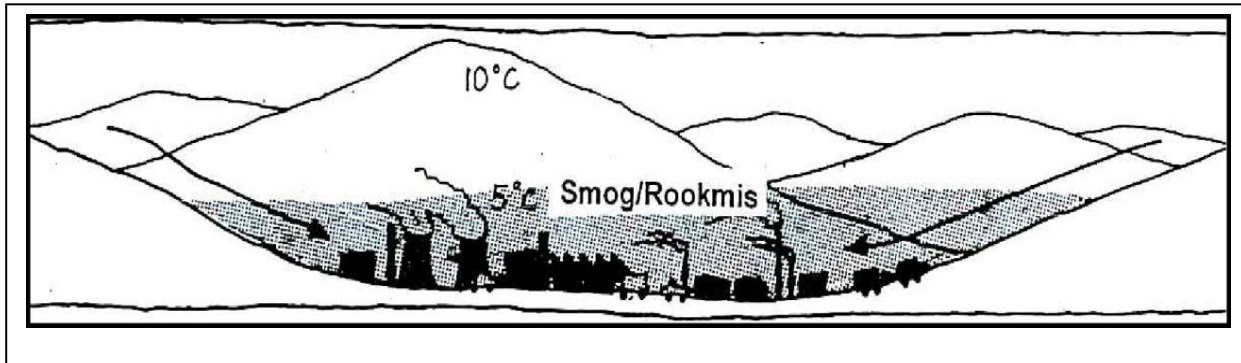
FIGURE 2.1

2.1.1 Does Figure 2.1 illustrate day-time or night-time conditions?   (1 x 2) (2)
2.1.2 Give ONE reason for your answer to Question 2.1.1.   (1 x 2) (2)
2.1.3 With reference to Figure 2.1 explain why the smog is trapped on
       the valley floor.   (2 x 2) (4)
2.1.4 The layer of smog will increase temperatures over the city. Explain
       why this is the case.   (2 x 2) (4)
2.1.5 Name TWO possible measures that can be introduced to reduce
       the formation of smog on the valley floor.   (2 x 2) (4)
                                                                      [16]

2.2   Figure 2.2 on the following page is a satellite image of a mid-latitude cyclone
        approaching Cape Town.
        The satellite image shows typical winter conditions for South Africa.

FIGURE 2.2
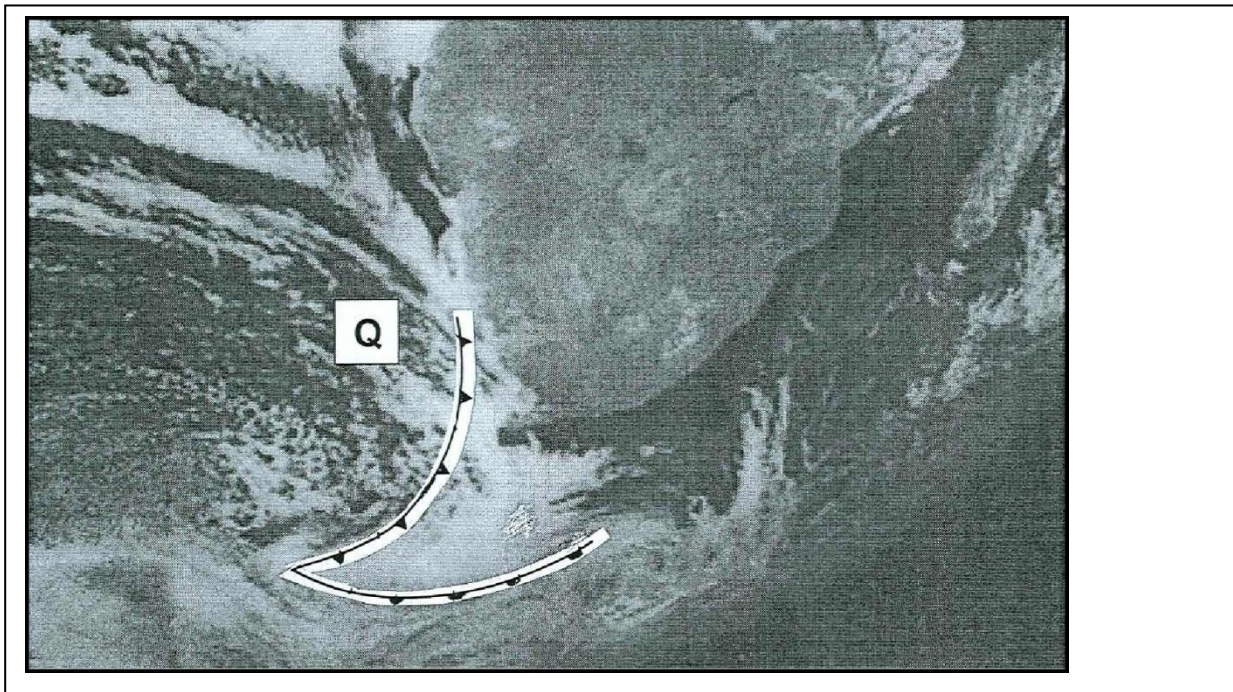
2.2.1   Excluding the position of the mid-latitude cyclone, give evidence
        from the satellite image that typical winter conditions are shown.   (1 x 2) (2)
2.2.2   Why do mid-latitude cyclones usually pass over Cape Town during
        the winter season?   (2 x 2) (4)
2.2.3   Draw a simple, free-hand cross section through the front labelled **Q**.
        Clearly indicate the position of the cold air mass, air movement and
        the main rain-bearing cloud associated with front **Q**.   (3 x 2) (6)
2.2.4   Write a single paragraph (no longer than 12 lines) predicting, and
        explaining, any THREE weather changes inhabitants of Cape Town
        will experience within the next 24 hours as front **Q** passes over.   (6 x 2) (12)
                                                                                  [24]

2.3   Refer to Figure 2.3 illustrating the process of river capture.

FIGURE 2.3
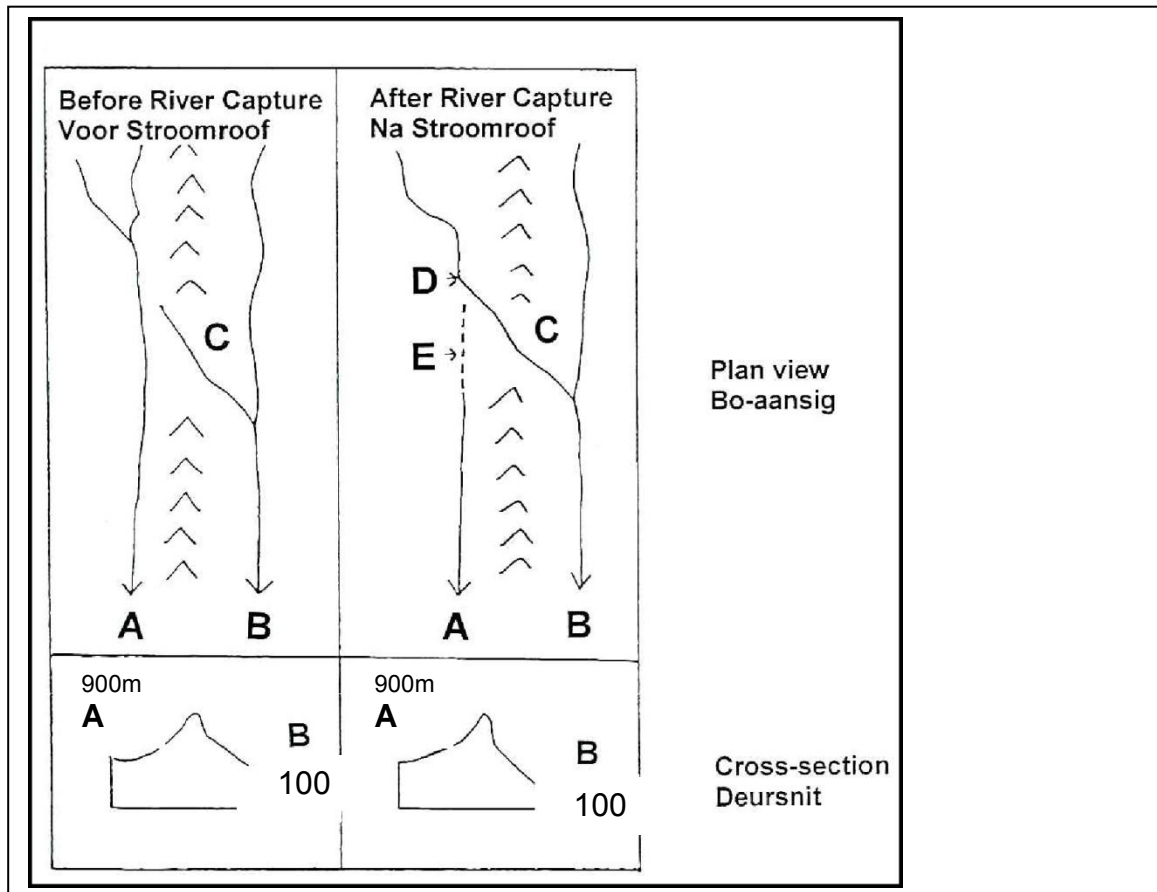
2.3.1 Compare the heights of rivers **A** and **B**.   (1 x 2) (2)
2.3.2 Why is the height difference, referred to in question 2.3.1, necessary
       for river capture to occur?   (2 x 2) (4)
2.3.3 What name is given to feature **D**?   (1 x 2) (2)
2.3.4 Describe TWO changes that took place in river **C** after river capture
       had occurred.   (2 x 2) (4)
2.3.5 Explain why one can say that the lower reaches of river **B** rejuvenated
       itself after river capture had occurred.   (2 x 2) (4)
                                                                         [16]

EXAM PAPER SECTION B: PEOPLE AND PLACES: RURAL AND URBAN
SETTLEMENTS, PEOPLE AND THEIR NEEDS

QUESTION 3:   **25 minutes**   **50 marks**   *(Source: DoE March 2011)*

3.1   Refer to Figure 3.1 showing travel patterns for shopping. Give ONE term for each of the following descriptions:

FIGURE 3.1
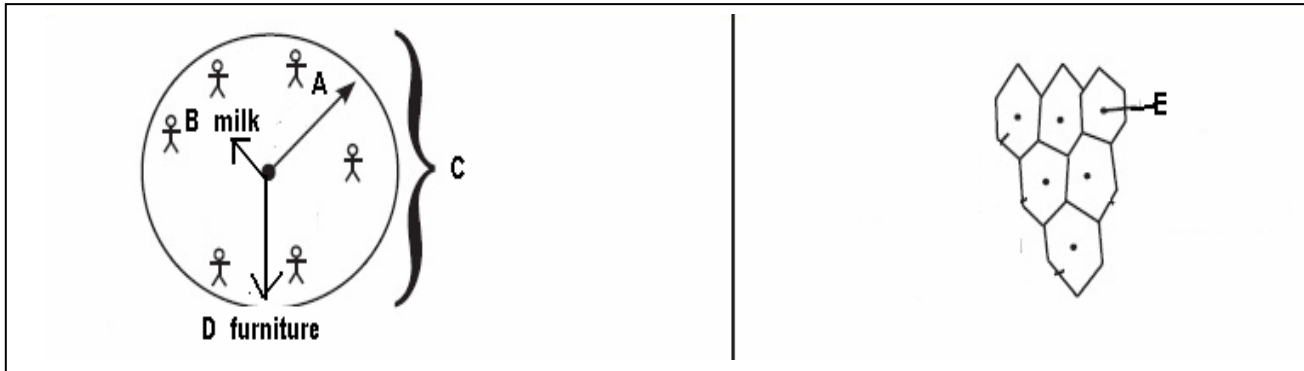
3.1.1 **A** depicts the maximum distance a customer is prepared to travel in order to purchase a product.

3.1.2 The term used for products, such as **B**, which are used on a daily basis and are relatively cheap.

3.1.3 **C** refers to the catchment area from where an urban area draws its customers.

3.1.4 The minimum number of customers to make a service profitable.

3.1.5 **E** is an urban area that provides services to the surrounding rural area.

(5 x 2) [10]

3.2   Refer to Figure 3.2 showing the movement of people between rural areas and cities.

FIGURE 3.2
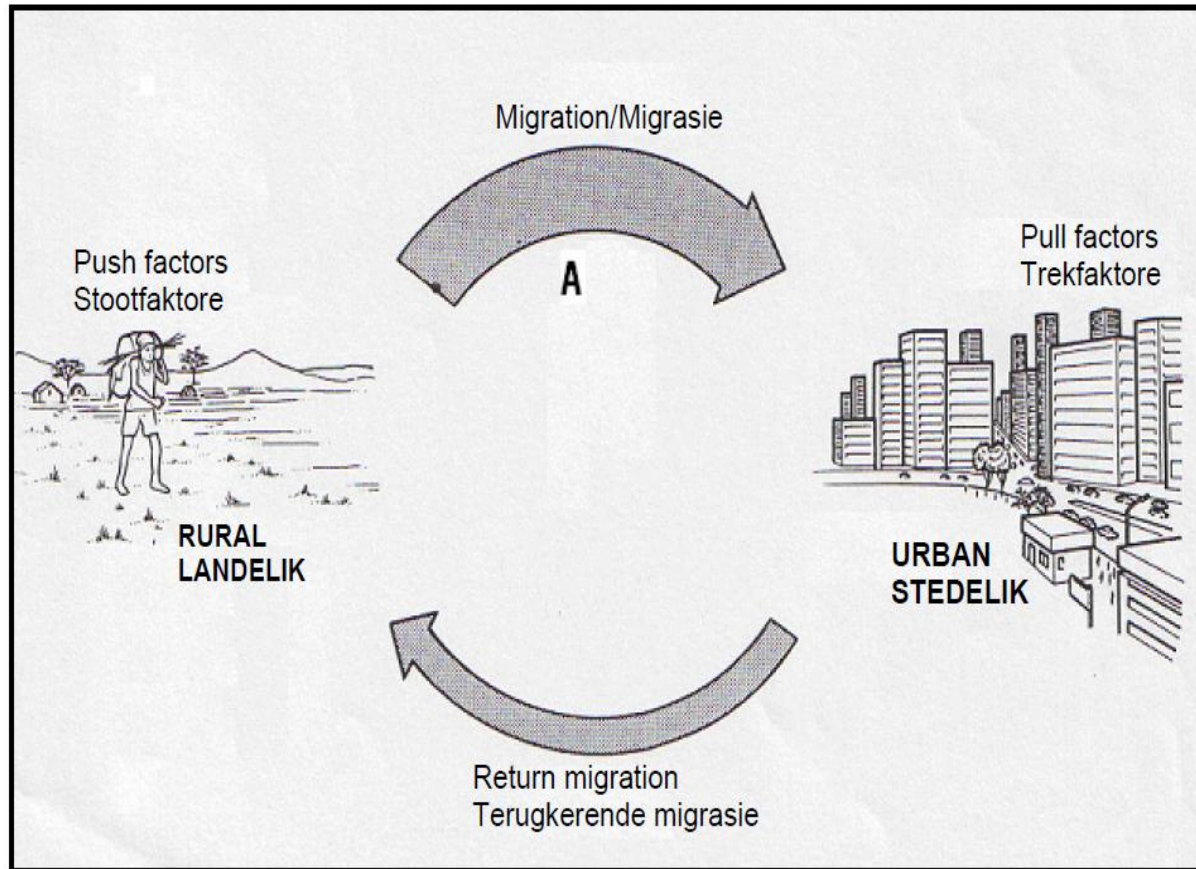
3.2.1 Name ONE neighbouring country from which South African cities
      attract migrants.   (1 x 2) (2)

3.2.2 Define the term *migrant*.   (1 x 2) (2)

3.2.3 Give TWO reasons why many people leave the rural areas and move
      to South African cities.   (2 x 2) (4)

3.2.4 Explain how the movement, represented by **A**, impacts on the
      functioning of cities.   (2 x 2) (4)

3.2.5 Give TWO reasons why migrants are sometimes not accepted by
      locals in South African cities.   (2 x 2) (4)

                                                               [16]

3.3   Examine Figure 3.3 which shows an urban area and its surroundings.

FIGURE 3.3

Golf course/Gholfbaan

Country park / Landelike park	Housing estate / Behuisingslandgoed	Shopping centre / Winkelsentrum
Farmland / Landerye	Inner urban / Binne-stedelik	Outer urban / Buite-stedelik
Motorway / Snelweg	Roads / Paaie	Business park / Besigheidspark
		Sewage works / Rioolwerke
		Railway line / Spoorlyn
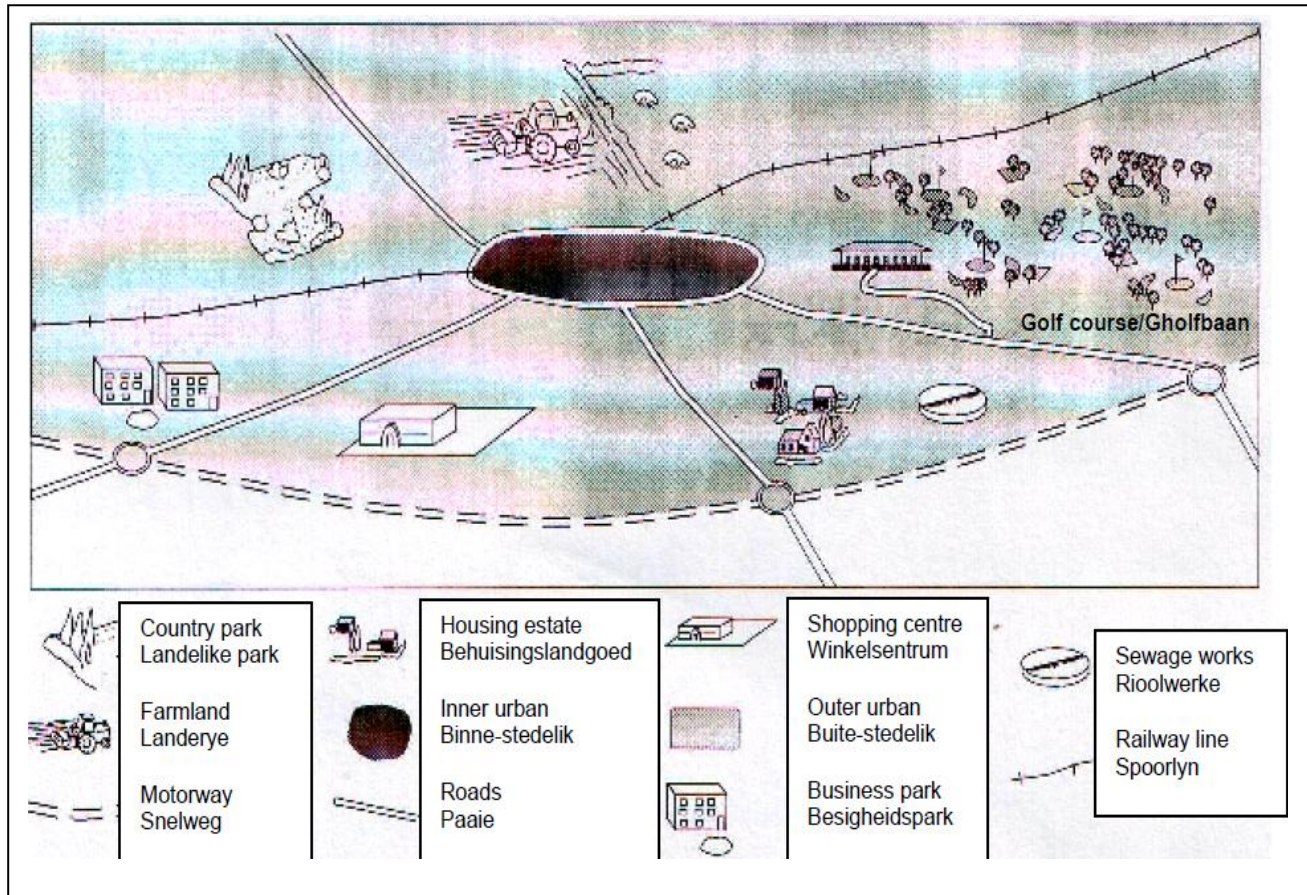
3.3.1   Define the term *rural-urban fringe*.   (1 x 2) (2)

3.3.2   Give ONE reason why the golf course is located in the rural-urban fringe.
                                                                                                  (1 x 2) (2)

3.3.3   Give the term used to describe the movement of supermarkets and other
   retail stores out of the CBD to the suburbs.   (1 x 2) (2)

3.3.4   State TWO factors that would have favoured the location of the business
        park in Figure 3.3.   (2 x 2) (4)

3.3.5   Which urban land-use model best describes the arrangement of the
        various land-use zones?   (1 x 2) (2)

3.3.6   The inner city areas of many South African cities are declining (businesses
        are moving out). Write a single paragraph (no more than 12 lines)
        explaining why the inner city area is losing its importance. Also mention
        some disadvantages of this decline for the inner city areas.   (6 x 2) (12)
                                                                                          [24]

QUESTION 4:   5 minutes   66 marks   *(Source: DoE November 2010)*

4.1.   Refer to Figure 4.1 illustrating the influence of site on settlements. Match the
       letters A to E with the site names given below. Write down the letters (A-E)
       next to the question numbers (4.1.1 – 4.1.5).

FIGURE 4.1
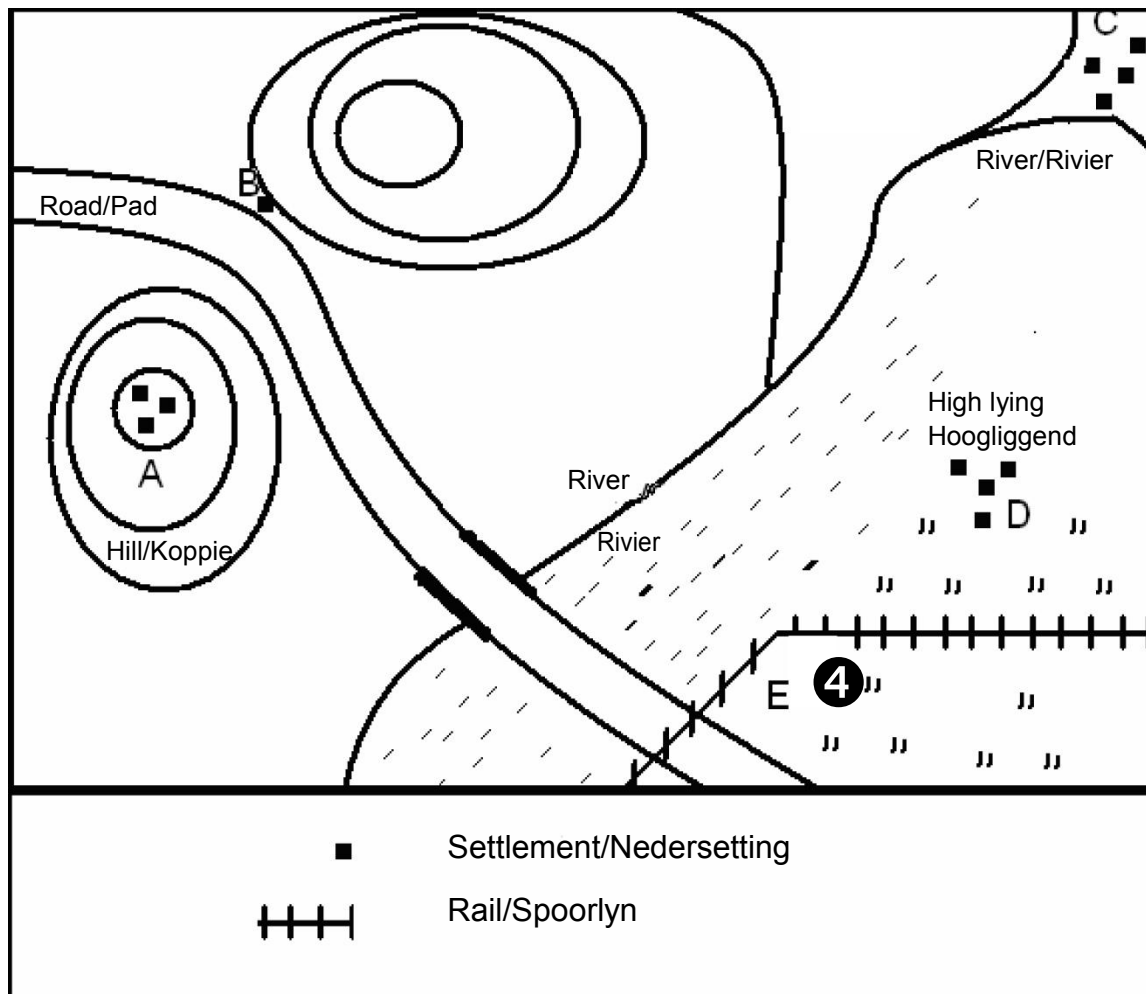
4.1.1   Wet-point site
4.1.2   Defensive site
4.1.3   Gap site
4.1.4   Dry-point site
4.1.5   Break-of-bulk point   (5 x 2) [10]

4.2   Rapid urban growth and urban expansion have a major impact on large cities in South Africa. Refer to Figure 4.2 illustrating the urban profile of a large city in South Africa schematically.

FIGURE 4.2

City centre/Middestad
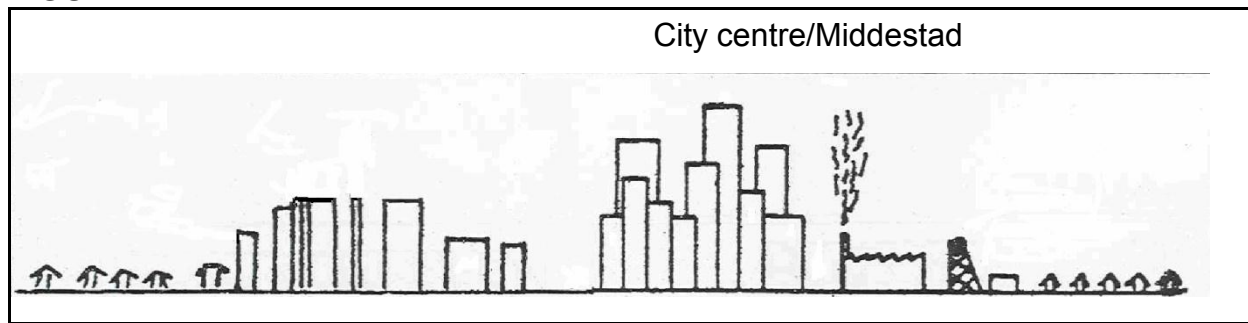
4.2.1   Distinguish between *urban growth* and *urban expansion*.   (2 x 2) (4)
4.2.2   Give a brief description of the shape of the urban profile of the city
        illustrated in Figure 4.2.   (2 x 2) (4)
4.2.3   Explain why this city's profile assumed the shape as illustrated in
        Question 4.2.2.   (2 x 2) (4)
4.2.4   What land use occurs where the urban profile peaks?   (1 x 2) (2)
4.2.5   Give ONE reason why the land use mentioned in Question 4.2.4 occurs
        where the urban profile peaks.   (1 x 2) (2)
                                                                                          [16]

4.3   Read the edited extract on informal trade below before answering the questions that follow.

INFORMAL TRADE CRUCIAL FOR JOBS
Mail and Guardian

Every day a bus, usually packed to capacity, leaves Malawi for South Africa. Most of the passengers are informal traders, off to sell wooden curios in the main South African cities of Johannesburg, Durban and Cape Town.

Malawi has a population of 12 million of whom 65% live below the poverty line of less than a dollar per day. Economic analyst, Mavuto Bamusi, speaks highly of the effective role informal cross-border traders play in the Malawian economy. He says this type of trade offers economic opportunities to women and youth in the country, who would otherwise not be employed.

The concern is that usually they face all kinds of social and economic injustices, such as harassment by public authorities. They undergo unnecessary checks which are unregulated. He says the other disadvantage is that most of the traders are not literate.

4.3.1   Give ONE reason for Malawians engaging in informal trade.   (1 x 2) (2)
4.3.2   Why is informal trade also referred to as the 'invisible economy'?   (1 x 2) (2)
4.3.3   Explain TWO ways in which informal trade impacts on the formal sector. (2 x 2) (4)
4.3.4   Quote any TWO social injustices from the article that informal traders
        experience.   (2 x 2) (4)

4.3.5 Name ONE advantage and ONE disadvantage of the Malawians
       engaging in informal trade in South Africa.   (2 x 2) (4)
                                                                         [16]
4.4   Study the pie graph (Figure 4.4), which shows the composition of South Africa's GDP.

FIGURE 4.4

Composition of South Africa's GDP
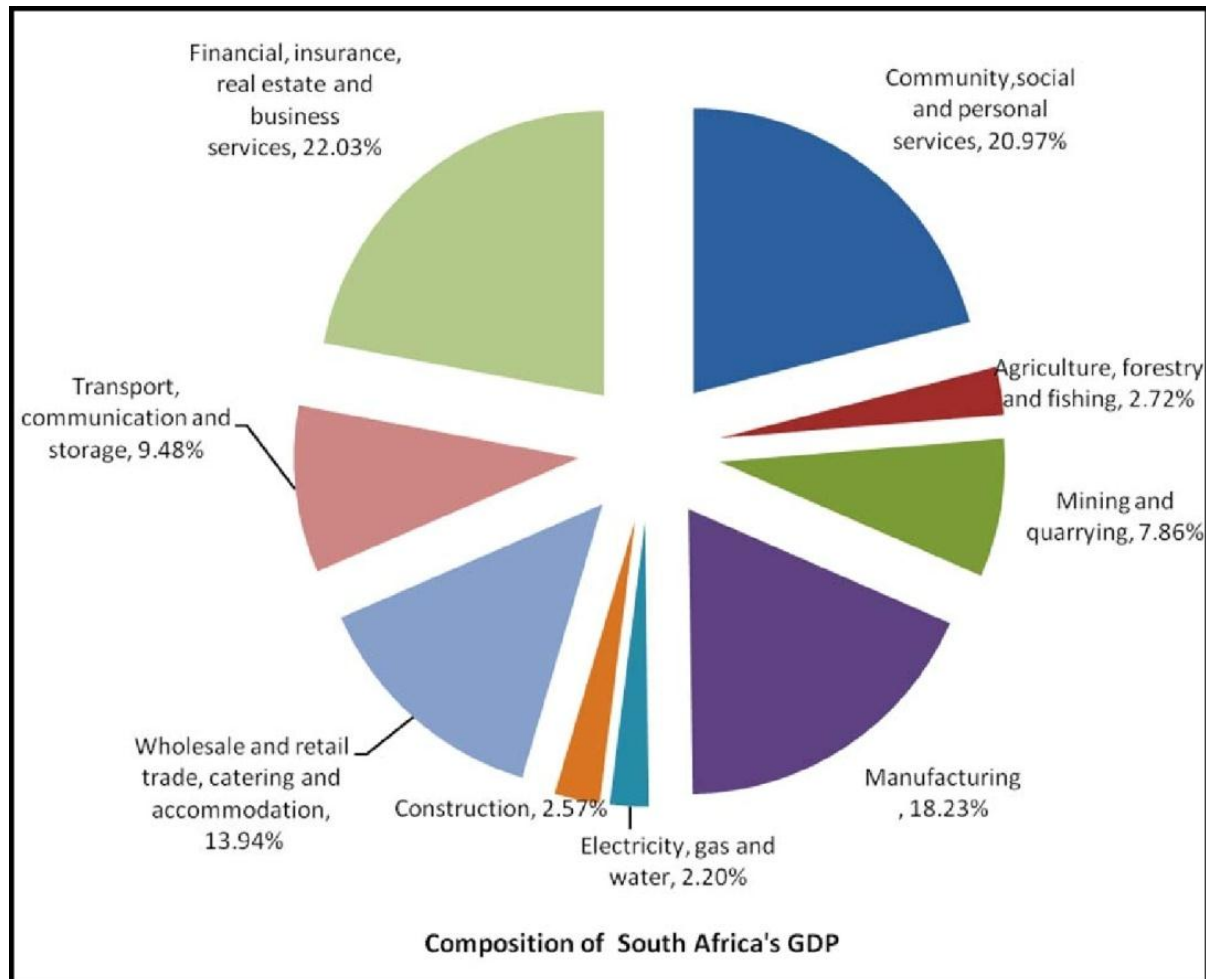
4.4.1 Define the term *gross domestic product.*   (1 x 2) (2)
4.4.2 Give TWO examples of tertiary activities from Figure 4.4.   (2 x 2) (4)
4.4.3 Calculate the percentage contribution made by the primary sector to the
       GDP.   (1 x 2) (2)
4.4.4 A significant part of South Africa's budget in the last financial year was
       allocated to transport and communication. Give TWO possible reasons
       for this decision.   (2 x 2) (4)
4.4.5 In a single paragraph (no more than 12 lines) discuss why a collapse in
        the South African agricultural industry can impact negatively on the
       development of South Africa's economy.   (6 x 2) (12)
                                                                         [24]

SECTION B: SOLUTIONS TO SECTION A

QUESTION 1

1.1
1.1.1 tropical cyclone√√
1.1.2 cumulonimbus √√
1.1.3 eye√√
1.1.4 thunderstorms√√
1.1.5 hurricane-strength winds√√ (5 x 2) (10)
1.2
1.2.1 C√√
1.2.2 B√√
1.2.3 A√√
1.2.4 D√√
1.2.5 A√√ (5 x 2) (10)
1.3
1.3.1 An increase in temperature with height√√ (1 x 2) (2)
1.3.2 Kalahari/Continental√√ (1 x 2) (2)
1.3.3 It originates in the subtropical high pressure zone√√
It is, therefore, associated with subsiding air√√
Land is cool in winter resulting in subsiding air
Upper air convergence results in subsidence
Subsidence resulting from the Hadley and Ferrel cells of circulation
(Any TWO) (2 x 2) (4)
1.3.4 In summer the inversion layer is high above the escarpment which allows
the moist air from over the Indian Ocean to be carried over the interior to
result in high rainfall√√
In winter the inversion layer is below the escarpment because of strong
subsidence, and moist air is prevented from reaching the land resulting in
stable conditions with no rain√√ (Any TWO) (2 x 2) (4)

1.3.5 In summer, due to the high rains, a variety of crops can be grown because
water is readily available√√
In winter drought resistant crops are planted and the farmer is restricted
in his/her choice√√
Stock graze freely during high rainfall in summer
Stock to be fed during lower rainfall in winter
(Any TWO) (2 x 2) (4)
1.4
1.4.1 Convex√√ (1 x 2) (2)
1.4.2 It is made up of resistant rock√√
Resistant rock does not round easily
Forms at an angel of between 20 and 35 degrees
A zone of accumulated weathered material
Predominant activity is deposition (Any ONE) (1 x 2) (2)
1.4.3 Crest√√ or cliff/scarp slope√√ (1 x 2) (2)

1.4.4 Uniform/constant slope√√
Retreats parallel to the original slope√√
Forms at an angle of between 20 and 35 degrees
A zone of accumulated weathered material
Predominant activity is deposition

(Any TWO)   (2 x 2) (4)

1.4.5 Pediment √√   (1 x 2) (2)

1.4.6 It has mature soil√√
It has more soil accumulated from erosion of other slopes√√
It is gentle so water infiltrates

(Any TWO)   (2 x 2) (4)
[52]

QUESTION 2

2.1
2.1.1 Night-time√√   (1 x 2) (2)

2.1.2 Cold air is moving down the slope√√
Temperature on valley floor is 5°C lower than on the valley slopes

(Any ONE)   (1 x 2) (2)

2.1.3 In the evening/at night mountain slopes cool and cold air rolls into
the valley resulting in warm air being displaced from the valley √√
A thermal belt forms trapping the smog√√   (2 x 2) (4)

2.1.4 Smog is made up of pollutants from the industries and fog√√
Pollutants trap heat√√
Pollution dome forms

(Any TWO)   (2 x 2) (4)

2.1.5 Decentralise industries/move them out of valley floor√√
Build higher chimneys that go beyond the thermal belt√√
Put filters on chimneys to trap the pollutants

(Any TWO)   (2 x 2) (4)

2.2
2.2.1 Very little cloud cover over the land/clear skies√√   (1 x 2) (2)

2.2.2 All pressure systems move north with the apparent movement of the sun√√
Northward movement of the ITCZ√√
Mid-latitude cyclone migrate northward with pressure belts

(Any TWO) (2 x 2) (4)

2.2.3

Cold air (2)

Cumulonimbus (2)

(2) for arrows showing air movement
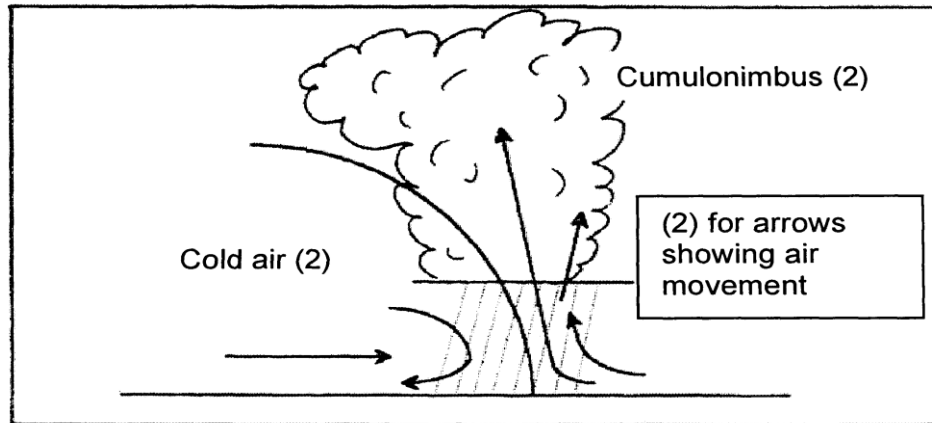
(3 x 2) (6)

2.2.4 Drop in temperature √√ because of cold front√√
Increase in pressure√√ because cold air is heavy√√
Thunderstorms√√ because of massive cumulonimbus clouds √√
Decrease in humidity √√ because cold air does not have much moisture√√
Winds are strong and gusty and they back√√ because of the clockwise movement of the cyclone√√

(Any THREE plus their accompanying explanation)   (6 x 2) (12)

2.3

2.3.1 A = 900m OR higher up and B = 100m OR lower/ river A is higher than river B√√   (1 x 2) (2)

2.3.2 Steeper slope creates a difference in the speed of the rivers√√
The rate of erosion will also be different√√
Stream will erode headward√√
Makes it possible for river at lower level to capture headwaters of river at higher level√√

(Any TWO) (2 x 2) (4)

2.3.3 Elbow of capture√√   (1 x 2) (2)

2.3.4 Increased velocity√√
Volume of water increases√√
Rate of erosion increases
Rejuvenation may occur
Vertical erosion will increase
Deposition will decrease

(Any TWO) (2 x 2) (4)

2.3.5 More water and energy to form the following features√√
Incised/entrenched meanders√√
Valleys within valleys
Paired terraces/terraces
Knickpoint waterfalls   (Any TWO) (2 x 2) (4)

[56]

QUESTION 3

3.1

3.1.1 Range√√

3.1.2 Low order/convenience goods√√

3.1.3 Sphere of influence/market area√√

3.1.4 Threshold population√√

3.1.5 Central place√√   (5 x 2) [10]

3.2

3.2.1 Zimbabwe√√
       Mozambique √√
       Lesotho√√
       Swaziland√√   (Any ONE) (1 x 2) (2)

3.2.2 People that move voluntarily from one country to another√√ (Concept)   (1x 2) (2)

3.2.3 Infertile soil √√ natural disasters √√ consolidation of farmland
       lack of services; poverty; fewer jobs; low salaries; crime in rural areas;
       more jobs; better housing; good infrastructure; high standard of living;
       better facilities in the cities; better salaries   (Any TWO) (2 x 2) (4)

3.2.4 Growth of informal settlements√√ backlog in housing√√ backlog in
       infrastructure development; backlog in services, crime, overcrowding,
       traffic congestion and pollution, breakdown of values, traditions and customs.
                                                              (Any TWO) (2 x 2) (4)

3.2.5 Xenophobia √√ taking the jobs of locals √√ taking women from locals; have
       strange customs and traditions that the locals don't understand; associated
       with crime and drugs; sell goods at a cheaper rate, therefore, taking business
       from the local entrepreneurs; they speak a different language that is strange
       to the locals.   (Any TWO) (2 x 2) (4)

3.3

3.3.1 It is a zone that has a mixture of rural and urban functions and marks the
       point where urban land merges with rural√√

                                                              (Concept)   (1 x 2) (2)

3.3.2 Land is cheaper√√ golf course requires large tracks of land and it is much
       more feasible to locate on the rural urban fringe   (Any ONE)(1 x 2) (2)

3.3.3 Commercial decentralisation√√   (1 x 2) (2)

3.3.4 Close to road√√ close to railway√√ vacant land for expansion, away from
       built-up area, accessibility to CBD, close to motorway
                                                              (Any TWO) (2 x 2) (4)

3.3.5 Sector model√√   (1 x 2) (2)

3.3.6 **Why inner city is losing prominence:**
       Crime√√
       Pollution√√
       Un-hygienic conditions/litter√√
       Traffic congestion√√
       Decrease in accessibility√√
       Overcrowding√√
       Illegal trading on pavements√√

Disadvantages of the decline
Buildings left vacant√√
Attract vagrants/homeless people√√
Loss of business√√
Loss of income√√
Buildings become dilapidated√√
Loss of employment√√
Ghost cities√√
Mixed income√√
Sphere of influence of CBD will become smaller√√
Attracts a lot of foreign businesses√√
Xenophobia√√
Social ills, e.g. drugs and prostitution√√
Ghettos from in the city centre√√

(Any SIX)   (6 x 2) (12)
[50]

QUESTION 4

4.1
4.1.1 C√√
4.1.2 A√√
4.1.3 B√√
4.1.4 D√√
4.1.5 E√√   (5 x 2) (10)

4.2
4.2.1 Urban growth refers to an increase in the number of people in urban areas√√
Urban expansion refers to physical growth of an urban area√√

(Concept)   (2 x 2) (4)

4.2.2 The urban profile has a double peak√√
The tallest buildings are found at the centre (CBD) √√
A second group of tall buildings found outside the CBD√√
The height of the buildings generally decreases as you move towards the
outskirts   (Any TWO) (2 x 2) (4)

4.2.3 **Highest peak**
High land values in the CBD√√
Accessibility
Building plots are smaller in the CBD
Lower peak
Secondary commercial zone√√
High rise accommodation zone
Land values relatively high

General
On the outskirts the land is cheaper√√
Building plots are larger on the outskirts
Building reduce in height to outskirts

(Any TWO) (2 x 2) (4)

4.2.4 CBD√√   (1 x 2) (2)
4.2.5 It is a zone of high accessibility; therefore, there is a high demand for the
land thus tall buildings are constructed to make maximum use of the land√√

(1 x 2) (2)

4.3
4.3.1 To make a living√√
Unemployment in Malawi
High level of poverty in Malawi

(Any ONE) (1 x 2) (2)

4.3.2 They don't pay taxes√√
Businesses are not registered

(Any ONE) (1 x 2) (2)

4.3.3 Low level of skills and productivity√√
Workers are self-employed√√
Reliance on locally available resources
Little capital investment
Employment status of workers not clear
Competitive and unrelated markets
Women and children mainly involved in this sector
Associated with casual labour
No job security and benefits for the workers
Low or irregular incomes and long working hours
Unhealthy and unsafe working conditions
Unauthorised use of vacant or private land
Small and undefined work places
Little or no social protection
No opportunity for education, skill building or health care
Not protected by the law

(Any TWO) (2 x 2) (4)

4.3.4 Harassment by public authorities√√
Unnecessary and unregulated checks√√
Authorities taking advantage of traders that are not literate

(Any TWO) (2 x 2) (4)

4.3.5 **Advantage**
It provides job opportunities for Malawians√√
It grows the Malawian economy
South Africans get cheap goods from Malawi
South Africans are exposed to a greater variety of goods

(Any ONE)(1 x 2) (2)

Disadvantage
It affects our economy negatively √√
It is not generating job opportunities in our economy
Xenophobia
Puts pressure on the South African resources
Adds to the problem of shanty towns
Aids and other diseases   (Any ONE)   (1 x 2) (2)

4.4
4.4.1 The total value of goods and services produced in a country in one year√√
                                                    (Concept)   (1 x 2) (2)

4.4.2 Electricity, gas and water√√
       Transport, communication and storage√√
       Financial, insurance, real estate and business services
       Community, social and personal services
       Wholesale and retail trade, catering and accommodation
                                                    (Any TWO)   (2 x 2) (4)
4.4.3 10,58%√√   (1 x 2) (2)

Disadvantage
It affects our economy negatively √√
It is not generating job opportunities in our economy
Xenophobia
Puts pressure on the South African resources
Adds to the problem of shanty towns
Aids and other diseases   (Any ONE)   (1 x 2) (2)

4.4
4.4.1 The total value of goods and services produced in a country in one year√√
                                                    (Concept)   (1 x 2) (2)

4.4.2 Electricity, gas and water√√
       Transport, communication and storage√√
       Financial, insurance, real estate and business services
       Community, social and personal services
       Wholesale and retail trade, catering and accommodation
                                                    (Any TWO)   (2 x 2) (4)
4.4.3 10,58%√√   (1 x 2) (2)

4.4.4 Preparations for the 2010 FIFA World Cup√√
       Poor state of South African roads√√
       Upgrading the public transport system (Gautrain, Re a Vaya,
       dedicated bus lanes)
       To improve communication networks so that we are in line with the rest
       of the world technologically   (Any TWO)   (2 x 2) (4)

4.4.5   Provides employment√√
Produces food to meet the demands of a rapidly growing population√√
Contributes to the GDP√√
Exporting√√
Foreign capital√√
Industrial development√√
Development of towns√√
Development of infrastructure√√
Development of trade√√

(Any SIX)   (6 x 2) (12)
[66]

SECTION C: HOMEWORK

QUESTION 1:   **10 minutes**   **20 marks**   *(Source: DoE March 2011)*

1.1.   Refer to Figure 1.1 showing a simplified cross-sectional sketch of the tri-cellular arrangement of atmospheric circulation. Choose the correct term between brackets to make each of the statements below TRUE. Write the term next to the question number (1.1.1 – 1.1.5).

FIGURE 1.1

Equator/Ewenaar
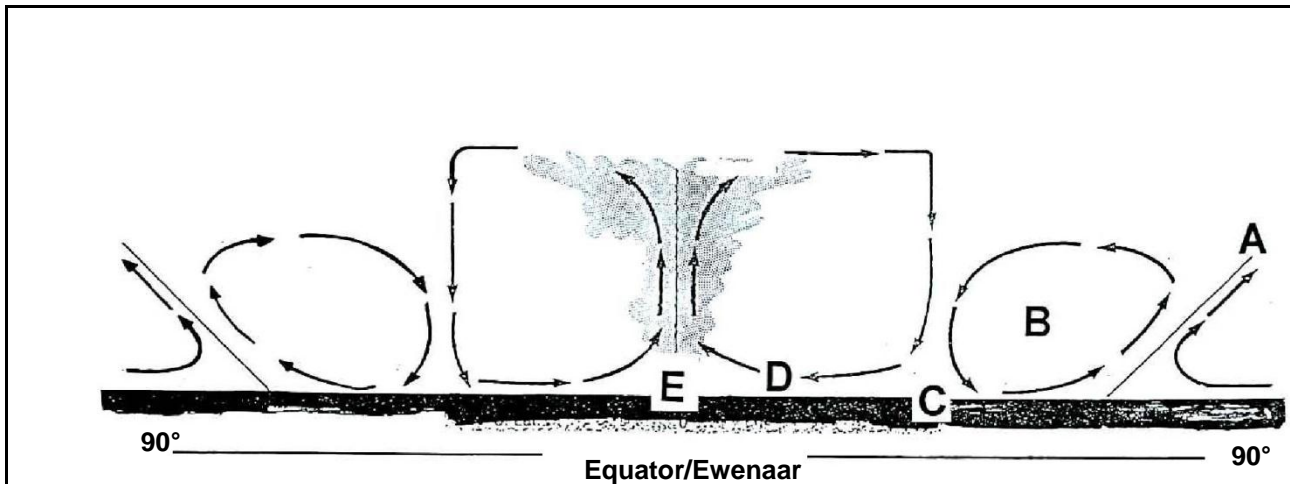
1.1.1   **A** represents the (polar/moisture) front.
1.1.2   **B** is the (tropical / mid-latitude) cell.
1.1.3   **C** represents a zone of (low/high) pressure.
1.1.4   **D** represents the (westerly/ tropical easterly) wind belt.
1.1.5   Surface (convergence / divergence) takes place at **E**.   (5 x 2) (10)

1.2   Refer to Figure 1.2 illustrating the movement of material down a slope.
Indicate whether the following statements are TRUE or FALSE. Write
'true' or false' next to the question number (1.2.1 – 1.2.5).

FIGURE 1.2
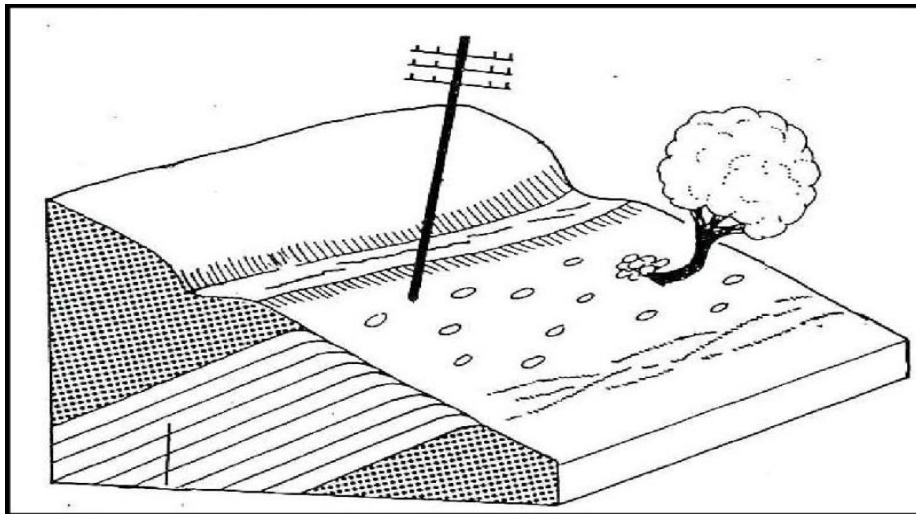
1.2.1 Figure 1.2 illustrates mass movement.
1.2.2 Figure 1.2 illustrates a rock fall.
1.2.3 The movement of material down a slope, illustrated in Figure 1.2, can
only occur if rainwater acts as a lubricant.
1.2.4 The movement of material down a slope, illustrated in Figure 1.2, is a
slow movement.
1.2.5 The material is moving down-slope under the influence of gravity.   (5 x 2) (10)

[20]

QUESTION 2:   **12 minutes**   **24 marks**   *(Source: DoE March 2011)*

Figure 2.1 illustrates the stream profiles of a typical South African river from its source to its river mouth. Various base levels of erosion are indicated along the stream profile.

FIGURE 2.1

2.1.1 What is a *base level of erosion*?   (1 x 2) (2)

2.1.2 Identify ONE temporary base level of erosion in Figure 2.1   (1 x 2) (2)

2.1.3 Draw a labelled longitudinal profile of the river, illustrated in Figure 2.1,
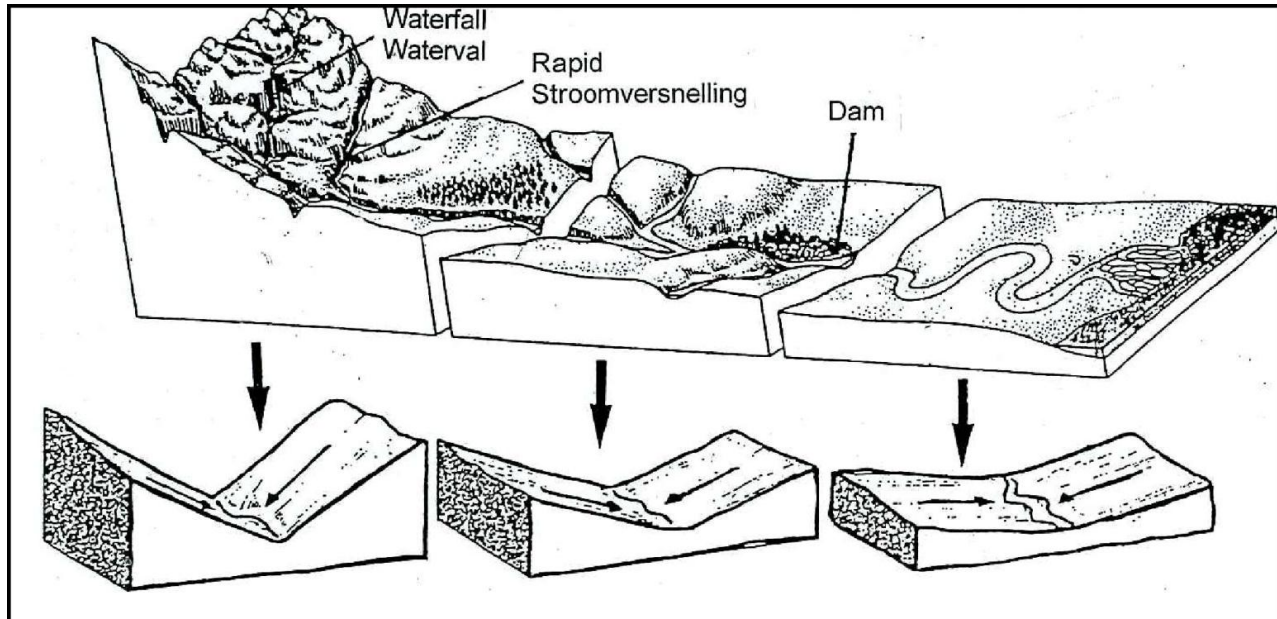   clearly showing how the temporary base levels of erosion could have
         influenced the shape thereof.   (2 x 2) (4)

2.1.4 How would you describe the longitudinal profile that you have drawn in
         Question 2.1.3?   (1 x 2) (2)

2.1.5 Name ONE of the most noticeable changes visible in the cross-section
         profiles of the river from its source to its river mouth.   (1 x 2) (2)

2.1.6 Write a single paragraph (no more than 12 lines) explaining why the
         cross-section profiles of the river change from its source to its river mouth.
                                                                                (6 x 2) (12)
                                                                                [24]

QUESTION 3:   **17 minutes**   **34 marks**   *(Source: DoE March 2011)*

Choose a description from COLUMN B that matches a term in COLUMN A. Write down only the letter (A – F) next to the question number (3.1.1 – 3.1.5), for example 3.1.6 H.

COLUMN A	COLUMN B
3.1.1 Balance of trade	A no barriers to the import and export of goods and services
3.1.2 Free trade	B exchange of goods and services between countries
3.1.3 Agglomeration	C the difference in value between imports and exports
3.1.4 Import substitution	D value of all goods and services produced in a country in one year
3.1.5 Trade	E concentration of industries in the core areas
	F replacement of goods previously purchased from other countries with locally manufactured goods

(5 x 2) [10]

3.2   Refer to the simplified land-use map Figure 3.2.

FIGURE 3.2
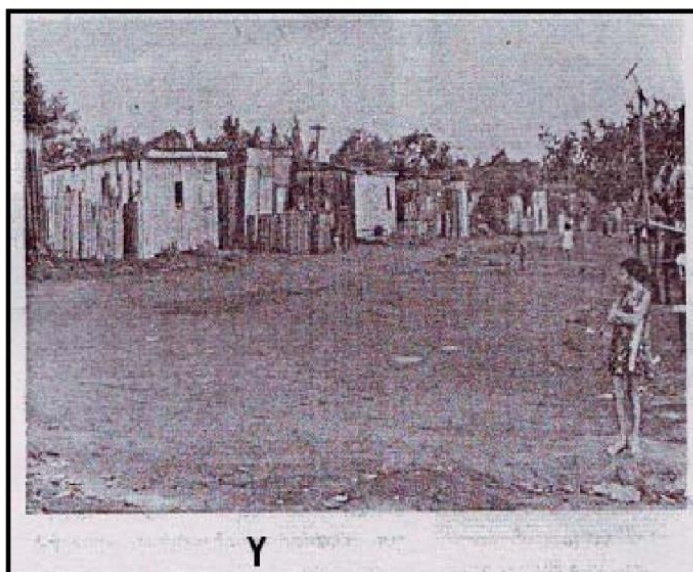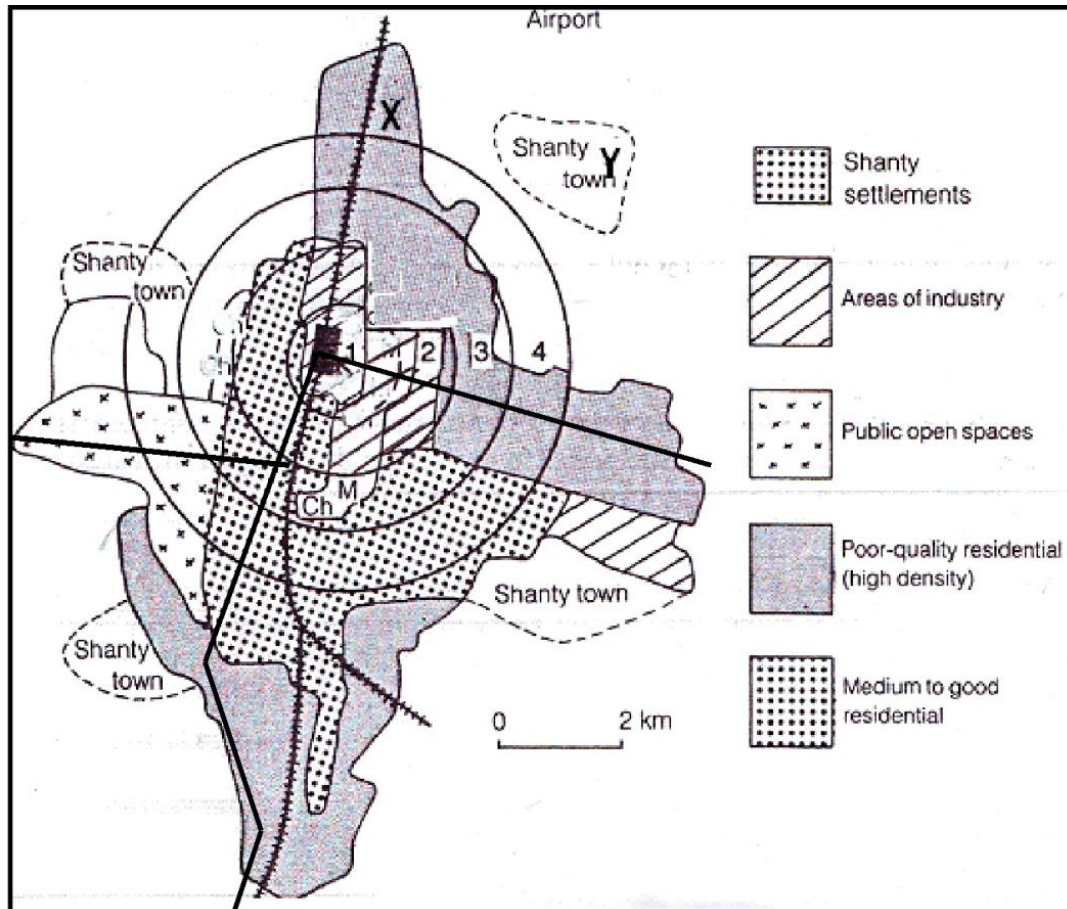
3.2.1   Give ONE reason that suggests that zone **1** is the CBD.   (1 x 2) (2)

3.2.2   Zone **2** is the transitional zone.

    (a) Indicate whether heavy or light industries are likely to be found here.   (1 x 2) (2)

    (b) Give ONE reason for your answer in question 3.2.2 (a).   (1 x 2) (2)

    (c) Why is this zone commonly referred to as the 'zone of decay'?   (1 x 2) (2)

3.2.3   Indicate, with a reason, which urban land-use model best describes the
    land-use pattern of this city.   (2 x 2) (4)

3.2.4   Photograph **Y** represents **Y** in Figure 3.2. In a single paragraph (no more
    than 12 lines), outline any problems, and possible solutions, that the shanty
town/informal settlement poses to the city authorities.   (6 x 2) (12)

            [24]

QUESTION 4:   **17 minutes**   **34 marks**   *(Source: DOE November 2010)*

Various options are given as possible answers to the following questions. Choose the
answer and write only the letter (A – D) next to the question number (4.1.1 – 4.1.5),
for example 4.1.6. A.

4.1.1 An industry will locate close to the raw material if…

    A   the raw material loses much of its weight during processing.

    B   the raw material gains more weight during processing.

    C   it is easier to transport the raw material than the final product.

    D   it is less expensive to transport the raw material than the final product.

4.1.2 Industries that are not strongly affected by locational factors are known as…industries.

    A   market-orientated

    B   raw-material orientated

    C   footloose

    D   bridge

4.1.3 A cash crop is a crop that…

    A   requires a lot of money to cultivate.

    B   is cultivated mainly for sale

    C   is cultivated mainly for own use.

    D   can only be grown in rich countries.

4.1.4 The following development programme focuses mainly on social aspects of
    development in South Africa:

    A   SDI

    B   IDZ

    C   GEAR

    D   RDP

4.1.5 The provision of transport is a …economic activity.

    A   primary

    B   secondary

    C   tertiary

    D   quaternary   (5 x 2) [10]

4.2   Read the extract below answering the questions that follow.

> The right of access to food is included in section 27 of the South African Constitution. The Constitution obliges the state to provide legislation and other supporting measures to ensure that all citizens are able to meet their basic food needs. The strategic framework for action to achieve food security was first outlined in the RDP in 1994 which identified food security as a basic human need. In 2000 the cabinet decided to launch an updated national food security strategy to streamline, harmonise and integrate diverse food security sub-programmes in South Africa into the Integrated Food Security Strategy.

4.2.1 Define the term *food security*.   (1 x 2) (2)

4.2.2 What does the abbreviation RDP stand for?   (1 x 2) (2)

4.2.3 Name TWO factors that contribute to food insecurity in South Africa.   (2 x 2) (4)

4.2.4 Briefly discuss the role that genetically modified food could play in
         ensuring food security in South Africa.   (2 x 2) (4)

4.2.5 Write a single paragraph (no longer than 12 lines) and name possible
         strategies that have been implemented and that could still be implemented
         to prevent food insecurity in southern Africa.   (6 x 2) (12)

                                                                                         [24]

SECTION D: SOLUTIONS TO HOMEWORK

QUESTION 1

1.1
1.1.1 polar√√
1.1.2 mid-latitude√√
1.1.3 high√√
1.1.4 tropical easterly√√
1.1.5 convergence√√   (5 x 2) (10)

1.2
1.2.1 true√√
1.2.2 false√√
1.2.3 false√√
1.2.4 true√√
1.2.5 true√√   (5 x 2) (10)
                                                                                    [20]

QUESTION 2

2.1

2.1.1   The lowest point to which a river can erode√√   (Concept)   (1 x 2) (2)

2.1.2   Rapid √√
Waterfall
Dam   (Any ONE)   (1 x 2) (2)

2.1.3

(2) marks for profile only
(2) marks for any ONE of the labels

Waterfall✓
Rapid ✓
Dam (√)
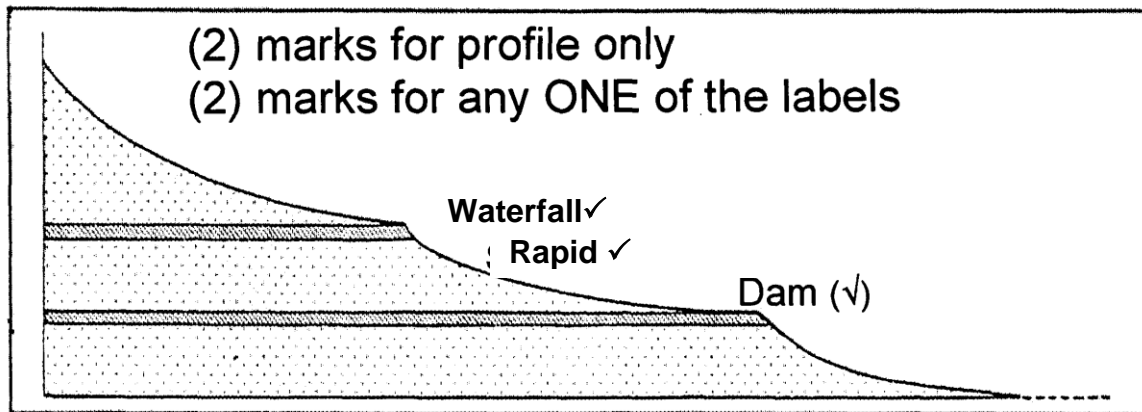
(2 x 2) (4)

2.1.4   Ungraded√√   (1 x 2) (2)

2.1.5   The valley sides get gentler/the valley sides are lowered√√
The width of the river increases
The valley changes from v-shaped to more open valley

(Any ONE)   (1 x 2) (2)

2.1.6   The upper course vertical erosion is dominant√√
Therefore the river has steep slopes in the upper course√√
The valley is v-shaped√√
In the middle course vertical erosion is slowed down and lateral erosion becomes dominant√√
Therefore the valley assumes an open v- shape√√
In the lower course lateral erosion is dominant√√
The slopes of the valley become wide and gentler√√
The valley becomes more open/the valley becomes a flood plain√√
The lower course might have features such as meanders, oxbow lakes, braided streams, etc. √√

(Any six, but explaining all three courses)   (6 x 2) (12)

[24]

QUESTION 3

3.1
3.1.1 B√√
3.1.2 A√√
3.1.3 E√√
3.1.4 F√√
3.1.5 D√√   (5 x 2) (10)

3.2
3.2.1 It is centrally located√√   (1 x 2) (2)
3.2.2 (a)   Light industries√√   (1 x 2) (2)
       (b)   Land values are high in the transition zone and that will not be
               suitable for heavy industries√√
               Light industries require small plots of land therefore the transition
               zone is affordable√√
               Light industries can locate in high rise buildings found in the transition
               zone√√
               Light industries locate close to the market place√√
               Light industries are not associated with pollution√√   (Any ONE)   (1 x 2) (2)
       (c)   The buildings are in a dilapidated state√√
               Area has many social problems such as unemployment, crime and
               prostitution√√
               Waiting for expansion of the CBD √√   (Any ONE)   (1 x 2) (2)
3.2.3 Sector model√√
       Various land-use zones occupy sectors√√   (2 x 2) (4)

3.2.4 **Problems shanty towns pose to city authorities**
       Lack of facilities and services√√
       Houses constructed from plastic, tin, cardboard etc. √√
       Land is illegally occupied√√
       Crime√√
       Unemployment√√
       Overcrowding √√
       Unhygienic conditions√√
       They are vulnerable in times of floods and heavy rains which puts added
       pressure on authorities√√
       It is not easily accessible√√
       Fire hazards√√

       Solutions
       Formalising the settlements√√
       Improve the infrastructure (roads, buildings, facilities) √√
       Provide jobs√√
       Build away from the flood line√√
       Provide services such as water, sewerage and electricity√√
                           (Any six. Accept other reasonable answers)   (6 x 2) (12)
                                                                               [34]

QUESTION 4

4.1
4.1.1 A√√
4.1.2 C√√
4.1.3 B√√
4.1.4 D√√
4.1.5 C√√   (5 x 2) (10)

4.2
4.2.1 When sufficient food is produced to meet the needs of people √√

                                                    (Concept)   (1 x 2) (2)
4.2.2 Reconstruction and Development Programme√√   (1 x 2) (2)
4.2.3 Shortage of fertile/arable land√√
       Natural disasters, e.g. droughts√√, floods√√, hailstorms√√
       Monoculture
       Land tenure and security
       Lack of capital by subsistence farmers to expand
       HIV/Aids lowers life expectancy of farmers and labourers
       Lack of subsidy from the government
       Inadequate support for agricultural research
       Poor infrastructure in deep rural areas
       Rural – urban migration leaves land unutilised
                    (Any two. Accept any other reasonable answers)   (2 x 2) (4)
4.2.4 Genetically modified crops are more resistant to diseases/pests/viruses√√
       Produce more√√
       They have greater nutritional value
       They can grow under drought conditions/harsher climates
       Tolerance to salty soils
       More digestible crops for animals
       Longer storage life
                    (Any two. Accept any other reasonable answers)   (2 x 2) (4)

4.2.5   Conservation farming – use of organic compost, crop rotation, paddock grazing, drip irrigation√√

Storing of food from seasons where there has been surplus√√

Diversify economic activities in rural areas to include cottage industries such as dairy products and dried fruit√√

Use of genetically modified crops to increase output√√

Government to provide incentives and subsidies to farmers√√

Convert from subsistence farming to commercial farming to increase output√√

To hasten land-reform policies so that more people have access to land for farming√√

More research on how to improve food production for local conditions√√

We need more dams to be built in the drier parts of the country so that it encourages cultivation√√

Making farming research accessible to traditional farmers to improve production√√

Use of hybrid seeds√√

Growing mixture of crops/mixed farming√√

Building terraces and stone lines to conserve soil and water√√

Laws ensuring citizens' basic food needs are met√√

Introduction of national food-security strategy√√

(Any SIX. Accept any other reasonable answers)
(If listed and only words/phrases used **ONE mark**. If full sentences used **TWO marks**)

(6 x 2) (12)
[34]

SESSION 15.1

TOPIC: CONSOLIDATION – EXAMINATION PAPER 2: MAPWORK

! **Teacher Note:** The session consists of question from Paper 2. Please remind learners that in the examination they are required to answer **ALL** the questions on the question paper. The learners must read the questions carefully and number correctly. They must attempt all the questions especially the multiple-choice questions.

LESSON OVERVIEW

1. Three questions are to be answered
2. Two questions are used as homework

SECTION A: TYPICAL EXAM QUESTIONS

RESOURCES: ANNEXURE A AND ANNEXURE B ON PAGES 74 & 75

1. An extract from the topographical map 3322CD & 3422AB GEORGE
2. An extract of an orthophoto George

Instructions: Answer all the questions in the spaces provided on this question paper.

The following English terms and their Afrikaans translations are shown on the 1:50 000 topographical map.

ENGLISH	AFRIKAANS
Aerodrome	Vliegveld
Canal	Kanaal
Cemetry	Begrafplaas
College	Kollege
Crocodile Ranch	Krokodilplaas
Factory	Fabriek
Furrow	Voor
Game Park	Wildpark
Golf Course	Gholfbaan
Rifle Range	Skietbaan
Sewage Disposal Works	Rioolslykwerke
Showgrounds	Skougronde
Tourist Camp	Toeristekamp
Weir	Dwarswal

QUESTION 1: MULTIPLE-CHOICE   **10 minutes**   *(Source: DoE March 2011)*

Choose the correct answer and write in into the block provided.

1.1   George is a…
   A   city
   B   residential area
   C   town
   D   farm area

1.2   The direction from Camphers Drift to George is…
   A   south-east
   B   south
   C   south-west
   D   north

1.3   The landform in the vicinity of **F** on the topographical map is a….
   A   gorge
   B   saddle
   C   valley
   D   spur

1.4   The Gwaing River is an example of a ……river.
   A   perennial
   B   non-perennial
   C   periodic
   D   episodic

1.5   The location of the George station (B3).
   A   33°57'55" E; 22° 28' 05" S
   B   33° 56' 48" S; 22° 25' 05"E
   C   33°57' 55"S; 22° 28' 05"E
   D   22° 57' 55"S; 33°28'05"E

1.6   The area labelled **C** on the orthophomap is…..
   A   CBD
   B   residential
   C   greenbelt
   D   industry

1.7   The land in along the N9 is descending in a……. direction.
   A   north-west to south-east
   B   south to north
   C   north-east to north-west
   D   south-west

1.8   Calculate the distance along the railway line from the station at George to Gwaing station (E1). Give your answer in km ….

    A   690 km
    B   0,69km
    C   6,9 km
    D   69,0km

1.9   Identify land use at **G** on the orthophoto map.
    A   Industry
    B   School
    C   Recreational facility
    D   Dam

1.10   What type of rainfall does the mapped area receive?
    A   periodical
    B   throughout the year
    C   seasonal
    D   sporadic   (10 x 2) [20]

QUESTION 2:   20 minutes   *(Source: Exam Success Grade 12, X-Kit grade 12)*

2.1   Calculate the area of the marked section on the orthophoto map.
      Give your answer in km².   (4)

2.2   Calculate the average gradient of △123 (A1) to the dam at Z (C1).   (4)

2.3   Draw a cross-section from •212 (C1) to •196 (E2).
      Use a vertical scale of 5mm = 20m.
      On your cross-section label the N2 and the Camfersdrift River.   (8)

2.4   Calculate the vertical exaggeration of the cross-section.   (4)
                                                                          [20]

QUESTION 3: 30 minutes   *(Source: Exam Success Grade 12, X-Kit grade 12)*

3.1   In which direction is the Gwaing River flowing? Provide a reason
        for your answer.   (2 x 2) (4)
3.2   Comment on the impact of the Gwaing River on the land uses on
        either side of it.   (3 x 2) (6)
3.3   Give evidence from the map that George receives rain throughout
        the year.   (2 x 2) (4)
3.4   If the prevailing wind is north-west, name two residential suburbs
        that will be subjected to pollution from the factories at George
        Industria.   (2 x 2) (4)
3.5   Locate the Skaapkop River in E4 and F4 and identify the drainage
        pattern in this area.   (1 x 2) (2)

3.6   The river is nearing the ocean, yet the river course does not have lower course characteristics.

      3.6.1   Describe the river course as it appears on the map.   (2 x 2) (4)

      3.6.2   Explain why the river course appears this way?   (2 x 2) (4)

3.7   Locate the farm Die Bof (F2).

      3.7.1   Identify this settlement pattern.   (1 x 2) (2)

      3.7.2   What evidence supports that this is a commercial farmer?   (3 x 2) (6)

3.8   Heavy industries are situated at **D** in George. Give TWO reasons which make this site suitable for industry.   (2 x 2) (4)

[40]

SECTION B: SOLUTIONS TO SECTION A

QUESTION 1

1.1   C√√
1.2   B√√
1.3   C√√
1.4   A√√
1.5   C√√
1.6   B√√
1.7   A√√
1.8   C√√
1.9   A√√
1.10   C√√   (10 x 2) **[20]**

QUESTION 2

2.1

Area = Length x Breadth√
   = 9,5cm x 6,9cm√
   = (9,5 x 0,1) x (6,9 x 0,1)√
   = 0,95km x 0,69km
   = 0,655km²√
   (0,7km²)   (4)

2.2

Gradient = $\dfrac{VI}{HE}$ √

= $\dfrac{327{,}4m - 200m}{9cm}$ √

= $\dfrac{127{,}4m}{(9cm \times 500)}$ √

= $\dfrac{127{,}4}{4\ 500}$

= $\dfrac{127{,}4 \div 127{,}4}{4\ 500 \div 127{,}4}$

= $\dfrac{1}{35}$

= 1:35 √   (4)
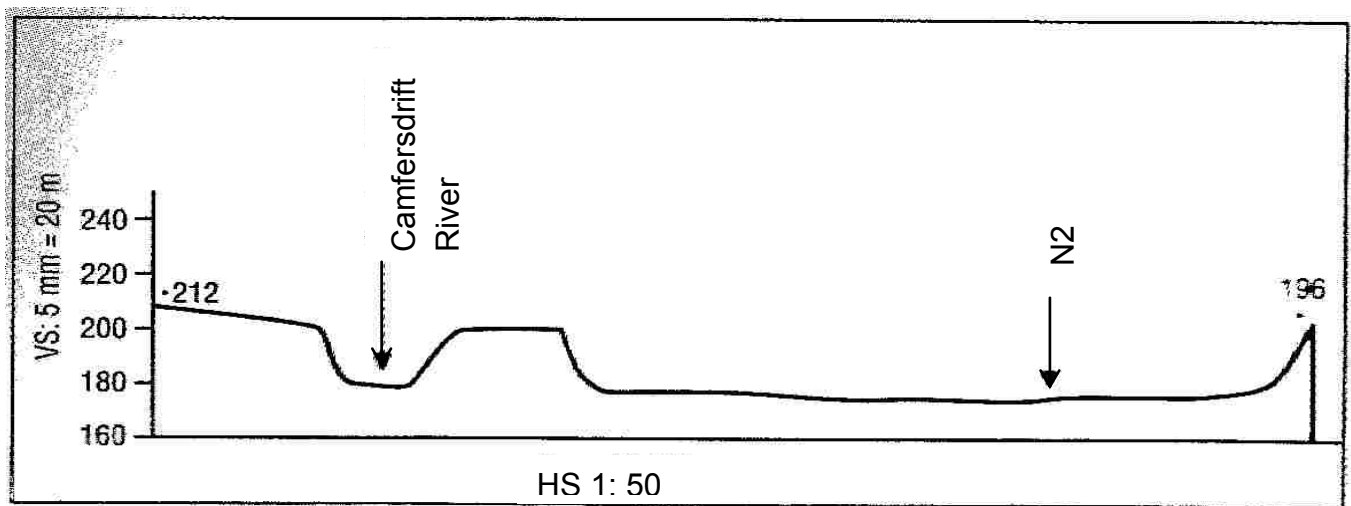
2.3

HS 1: 50

(8)

2.4

VE = $\dfrac{VS}{HS}$ √

                                           5mm = 20m

                                           1mm = 4m √

= $\dfrac{5mm = 20m}{1:50\ 000}$ √   1: 4 000

= $\dfrac{1}{4\ 000}$ x $\dfrac{50\ 000}{1}$

= 12,5 times √   (4)

[20]

QUESTION 3

3.1   South East.√√ River flows from high land to lower land, towards the sea. √√

                           (2 x 2) (4)

3.2   Water used for extensive agriculture (cultivated land) √√
       Water used for recreation (Fancourt Golf Course) √√
       Water used for sewage works√√   (3x2) (6)

3.3   Perennial rivers √√, forests√√, very few dams for storage√√,
       near coast – receives moisture-bearing onshore winds.   (2 x 2) (4)

3.4   Borchards√√
       Conville√√
       Thembalethu   (2 x 2) (4)

3.5   Trellis√√   (1 x 2) (2)

3.6

     3.6.1   The river course is narrow√√ with steep valley sides√√   .   (2 x 2) (4)
     3.6.2   The river shows characteristics of incised features√√, which
              Indicate the possibility of uplift and rejuvenation√√   (2 x 2) (4)

3.7

     3.7.1 Dispersed√√   (1 x 2) (2)
     3.7.2 Infrastructure such as roads√√ and dams√√, land under cultivation√√

                             (3 x 2) (6)

3.8   The site is near the railway line√√, away from the town√√, on flat land,
       near a water supply and has space to expand.   (2 x 2) (4)

                                     [40]

SECTION C: HOMEWORK

QUESTION 1: CALCULATION   4 minutes
(Source: Exam Success Grade 12, X-Kit grade 12)

1.1   Calculate the current Magnetic bearing for •212 (C1) from •196 (E1).   [8]

QUESTION 2: GIS   30 minutes   *(Source:DOE various papers)*

2.1   Define the following concepts:

   2.1.1 Satellite remote sensing   (1 x 2) (2)

   2.1.2 Satellite data   (1 x 2) (2)

2.2   State any TWO ways in which geographical information can be
       obtained.   (2 x 2) (4)

2.3   Differentiate between spatial and attribute data.   (2 x 2) (4)

2.4 Name THREE attributes in the map overlay shown below: (3 x 2) (6)

Population size (average per block)

Dwellings (average number per block)

Other buildings (average per block)

Recreational areas (average square meterage per block)

Model of land use in a residential area
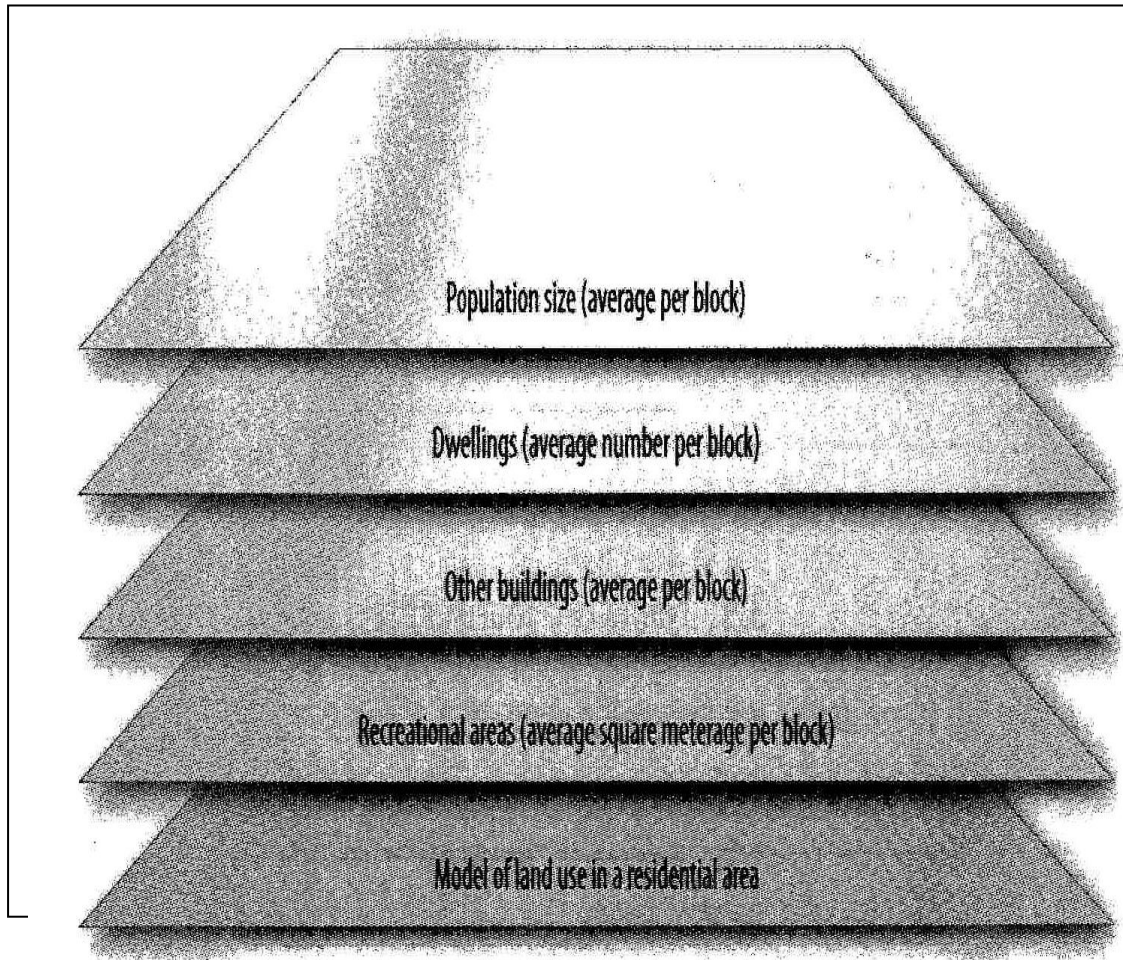
2.5 Differentiate between raster and vector spatial data composition. (2 x 2) (4)

[22]

SECTION D: SOLUTIONS TO HOMEWORK

QUESTION 1:   CALCULATION

1.1   MB = TB + MD√
        = 346°+25°09'
        = 371°09'   √   TB = 346°√
                               MD in 1997 = 23°59'Wof TN
                               Annual change = 5'W√
                               Change in years = 2011 – 1997 = 14 years√
                               Change in MD = 14 x 5' = 70'√
                               MD in 2011 = 1°10'√
                               MD in 2011 = 23°59' + 1°10'
                                          = 25°09'W of TN√   **[8]**

QUESTION 2:   GIS

2.1
2.1.1   The use of satellite photographs to gather geographical information √√
                                                            (1 x 2) (2)
2.1.2   Information gathered by satellites√√   (1 x 2) (2)

2.2   Maps√√
        Aerial photographs√√   (Any two)   (2 x 2) (4)
2.3   Spatial data is information about the real world√√
        Attribute data is additional information about a feature
        (e.g. statistical) √√   (2 x 2) (4)
2.4   Dwellings √√
        Population size√√
        Other buildings√√
        Recreational areas   (Any three)   (3 x 2) (6)

2.5   The raster model represents objects in the real world as data stored
        in grid structures on rectangular cells√√
        The vector model represents objects in the real world as points,
        lines and areas (polygons) √√   (2 x 2) (4)
                                                                   [22]

Annexure A
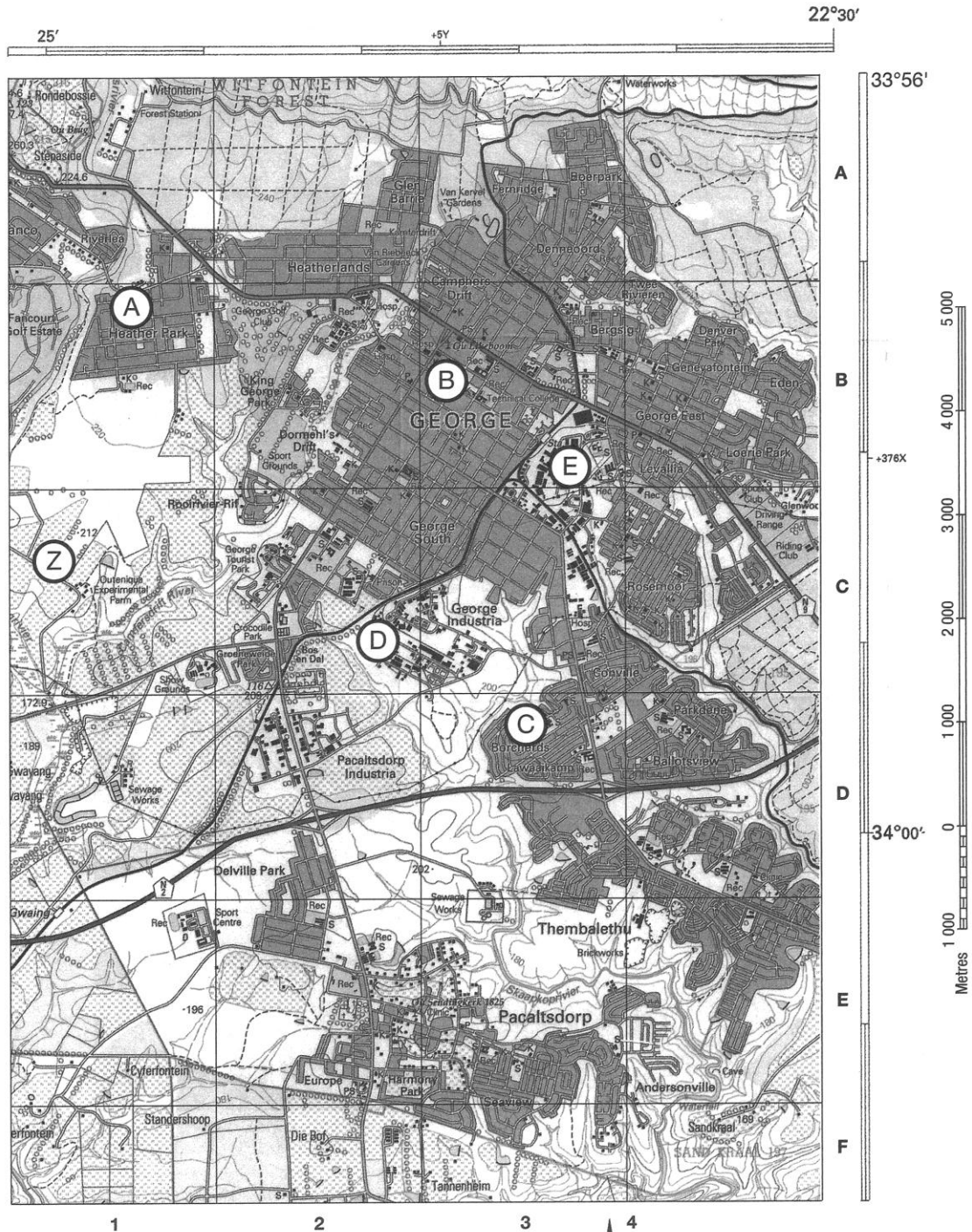
3322 CD & 3422 AB George, topographic map extract, 1:50 000

Mean magnetic declination 23°59'
West of True North (1997).
Mean annual change 5'
Westwards (1995-2000)

Annexure B
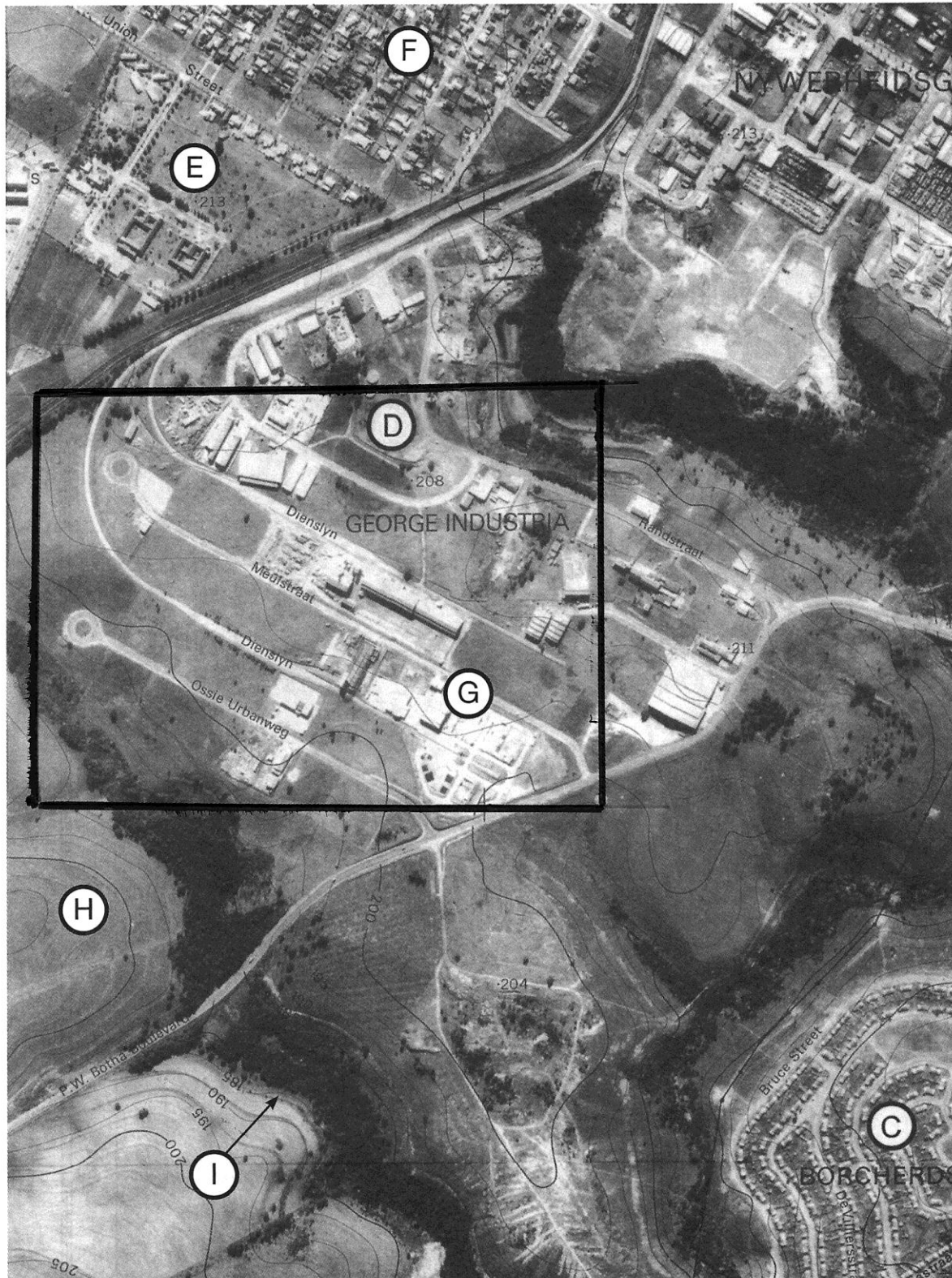
Orthophoto map extract, George 1:10 000

SESSION 15

TOPIC: CONSOLIDATION – EXAMINATION PAPER 2: MAPWORK (2)

Teacher Note: This session consists of a Paper 2. Please remind the learners that in the examination they are required to answer **ALL** the questions on the question paper. Remind learners to read the questions carefully and number correctly. They must please attempt all the questions, especially the multiple choice questions.

SECTION A: TYPICAL EXAM QUESTIONS

RESOURCES: ANNEXURE A AND ANNEXURE B ON PAGES 85 & 86
3. An extract from the topographical map 3227CD King William's Town
4. An extract of an orthophoto King William's Town

Instructions: Answer all the questions in the spaces provided on this question paper.

The following English terms and their Afrikaans translations are shown on the 1:50 000 topographical map.

ENGLISH	AFRIKAANS
Aerodrome	Vliegveld
Canal	Kanaal
Cemetery	Begrafplaas
College	Kollege
Factory	Fabriek
Furrow	Voor
Golf Course	Gholfbaan
Rifle Range	Skietbaan
Sewage Disposal Works	Rioolslykwerke
Showgrounds	Skougronde
Weir	Dwarswal

QUESTION 1: 10 minutes   *(Source: Exam success: Geography grade 12)*

1.1   Determine the compass direction from King William's Town to Bisho
        A   SW
        B   NW
        C   NE
        D   E

1.2   Calculate the true bearing from Reservoir Hill (C5) to Breidbach(D8).
        A   102°
        B   244°
        C   56°
        D   116°

1.3   Name the map sheet NW of the map 3227 CD King William's Town.

        A   3227CA
        B   3227DA
        C   3327CA
        D   2733DA

1.4   Find the co-ordinates of Jan Tshatshu Dam (F8).
        A   27°55'30"S 32°55'15"E
        B   32°55'30"S 27°55'15"E
        C   27°56'36"S 32°54'12"E
        D   32°55'12"S 27°54'24"E

1.5   Name the land use located at grid reference 32°54'45"S 27°23'45"E.
        A   Cultivated land
        B   Recreation
        C   Show grounds
        D   Orchards

1.6   Calculate the area of block E6 on the King William's Town topographical map.
        A   2 900km²
        B   290km²
        C   2,9km²
        D   0,29km²

1.7   Identify the feature marked **A** on the orthophoto map.
        A   Ridge
        B   Saddle
        C   Poort
        D   Valley

1.8   Identify the land use at **B** on the orthophoto map.
        A   Recreation
        B   Cemetery
        C   School
        D   Factory

1.9   The word scale of the orthophoto map is…
        A   1cm represents 0,01km
        B   1cm represents 0,1km
        C   1cm represents 1 000km
        D   1cm represents 10m

1.10   Calculate the straight line distance from the golf course (A6) to the
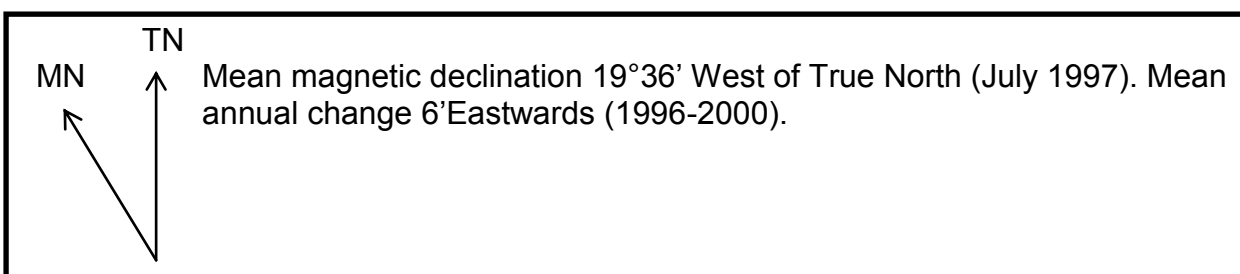   first road to eBhalasi (A7), along the main road.
       A   0,5km
       B   5km
       C   1km
       D   50km   (5 x 2) [10]

QUESTION 2:   20 minutes

(Source: Exam Success Grade 12, X-Kit grade 12, Exam success: Geography grade 12)

4.1   Calculate the curved distance (in km) from Belstone Station (D6) to
       Plumbago Station (C7), along the railway line.   (3)

2.2   Calculate the gradient of •473 (A4) to •453 (C7).   (4)

4.2   Calculate the magnetic bearing from •473 (A4) to •453 (C7). Make use
       of the magnetic declination below to do the calculation.

TN

MN   Mean magnetic declination 19°36' West of True North (July 1997). Mean
        annual change 6'Eastwards (1996-2000).

                                                                            (8)

2.4   If a cross-section had to be drawn, the vertical scale would have been
       1cm=20m. Keeping this in mind, calculate the vertical exaggeration of
       the cross-section.   (4)
                                                                           [19]

QUESTION 3: 30 minutes   *(Source: Exam Success Grade 12, X-Kit grade 12)*
3.1   What TWO physical factors have influenced the site and situation of
       King William's Town?   (2 x 2) (4)
3.2   Name TWO types of communication networks that make this an
       accessible area.   (2 x 2) (4)
3.3   Identify TWO urban land-use zones in Block C5.   (2 x 2) (4)
3.4   Which TWO factors have favoured the site and situation of the
       Schornville industrial area (D4-D5)?   (2 x 2) (4)
3.5   Is there sufficient labour supply for this industrial area? Provide map
       evidence to justify your answer.   (2 x 2) (4)
3.6   Name TWO high-order functions in King William's Town and its
       surrounding area.   (2 x 2) (4)
3.7   Name TWO tourist attractions of King William's Town and its
       surrounding area.   (2 x 2) (4)

3.8   Provide map evidence to show that the inhabitants of King William's
Town practise environmental conservation.   (1 x 2) (2)

3.9.1   Name the type of primary activity that takes place at **A**.   (1 x 2) (2)
3.9.2   What physical factor has influenced the site and situation of this
primary activity?   (1 x 2) (2)
3.9.3   Is this primary activity for commercial or subsistence use? Provide
a reason for your answer.   (2 x 2) (4)

3.10   What is the type of settlement pattern of Phakamisa and its
surrounding area?   (1 x 2) (2)
[40]

SECTION B: SOLUTIONS TO SECTION A

QUESTION 1: MULTIPLE CHOICE

1.1   C√√
1.2   D√√
1.3   A√√
1.4   B√√
1.5   A√√
1.6   C√√
1.7   A√√
1.8   B√√
1.9   B√√
1.10   A√√   (5 x 2) **[10]**

QUESTION 2
2.1
Distance on the map = 6cm√
Scale of the map 1:50 000
Distance = 6cm x 0,5√
= 3km√   (3)

2.2
$$G = \frac{VI}{HE}$$

= $\frac{473 - 453}{12,4cm√}$ 12,4cm x 500
6 200m √

= $\frac{20}{6\ 200}$ ÷ $\frac{20}{20}$ √

= 1: 310 √   (4)

2.3   MB = TB + MD   TB = 122°   √
       = 122° + 18°12'   √   MD in 1997 = 19°36'W of TN√
       = 140°12'   √   Annual change = 6'E
                                             Difference in years = 2011 -
                                                                          1997
                                                                    = 14years√
                                      Change in MD   = 14x6'
                                                                    = 84'E√
                                                                    = 1°24'E
                                      MD in 2011   = 19°36' –
                                                                     1° 24'√
                                                                    = 18°12'√
                                                                     W of TN

                                                                                      (8)

2.4 $VE = \dfrac{VS}{HS}$

       $= \dfrac{1cm = 20m}{1 : 50\ 000}$ √   1cm = 20 x 100
                                                                     = 2000cm√

       $= \dfrac{1}{2\ 000}$ x $\dfrac{50\ 000}{1}$ √

       =   25 times√   (4)
                                                                          [19]

QUESTION 3

3.1   Gradual land√√
       Buffalo River√√   (2 x 2) (4)
3.2   (Any two)
       Roads√√ railways √√ power lines   (2 x 2) (4)
3.3   Residential area √√ Recreational area√√   (2 x 2) (4)
3.4   (Any two)
       Accessible transport and communication networks√√, close to water
       resource (Buffalo River) √√, situated on gradual land, large open
       area for factories.   (2 x 2) (4)
3.5   Yes√√ close to residential areas for labour resource√√   (2 x 2) (4)
3.6   (Any two)
       Fort Hare University√√ hospitals / clinics√√ recreational activities,
        e.g. golf course, show grounds   (2 x 2) (4)
3.7   (Any two)
       House of Steven Bantu Biko 1997√√
       Presidential residence√√
       Yellowwoods Falls   (2 x 2) (4)
3.8   Protected areas (woodland)   (1 x 2) (2)

3.9
3.9.1 Farming√√   (1 x 2) (2)
3.9.2 Gradual land√√, large open area, close to Buffalo River for irrigation (1 x 2) (2)
3.9.3 Commercial farming√√ large farming area√√ close to transport routes
       Extensive cultural land, (intensive farming, specialists) close to
       settlements for easy access to workers.   (2 x 2) (4)
3.10   Nucleated settlement pattern√√   (1 x 2) (2)
                                                                              [40]

SECTION C: HOMEWORK

QUESTION 1:   16minutes   *(Source: Exam Success Grade 12, X-Kit grade 12)*
1.1   Choose the term from COLUMN B that matches a description in COLUMN A.
       Write only the letter (A –E) next to the question number (4.1.1 – 4.1.3), for example
       4.1.4 F.

COLUMN A	COLUMN B
1.1.1 The raw facts that are collected about a feature	A raster data
1.1.2 Gathering of data about the earth from a distance, using satellites such as Landsat	B vector data C remote sensing
1.1.3 Data represented by pixels in the form of grid cells or pixels	D data base E data

                                                                              (3 x 2) (6)

1.2   Name any TWO functional elements of GIS.   (2 x 2) (4)

1.3   With reference to the term buffering:
1.3.1 Define the term *buffering:*   (1 x 2) (2)
1.3.2 Explain how buffering can be used to protect the Yellowwoods Falls
       area on the topographical map.   (1 x 2) (2)

1.4   Which ONE, the topographical map or the orthophoto map, is an
       example of vector data?   (1 x 2) (2)
1.5   The police have not been able to track a car hijacking gang in the
       greater King William's Town area. How can they use GIS to narrow
       their search?   (2 x 2) (4)
                                                                              [20]

QUESTION 2:   35 minutes   *(Source: Exam Success Grade 12, X-Kit grade 12)*

(GENERAL QUESTIONS ON MAP PROJECTIONS AND GIS)

1.1   What is the difference between the Mercator's Cylindrical Projection
       and the Transverse Mercator Projection (Gauss Conformal)?   (1 x 2) (2)
1.2   State TWO advantages of Mercator's Cylindrical Projection.   (2 x 2) (4)
1.3   The accompanying diagram on the following page shows areas of a
       wetland that are vulnerable to pollution.

▨	Lowest vulnerability
⊞	Low vulnerability
⊙	Medium vulnerability
⦂	High vulnerability
▨	Very high
	vulnerability

2.3.1 State ONE advantage of GIS storage regarding the wetlands.   (1 x 2) (2)
2.3.2 Name the type of data model used. Provide an advantage of this
       model with reference to future planning.   (2 x 2) (4)
2.3.3 Identify the different GIS layers shown in the sketch.   (5 x 2) (10)

2.4   Define the following concepts:
2.4.1 Geographical locational element   (1 x 2) (2)
2.4.2 Attribute   (1 x 2) (2)
2.4.3 Spatial information (data)   (1 x 2) (2)

2.5   South Africa has a high birth rate. Owing to a lack of sex education
       in your society and among your friends, teenage pregnancies are
       increasing amongst learners at your school. As a developing country,
       the increasing birth rate has a negative effect on our economic growth
       and development. Using GIS map layers, explain how you can decrease
       the birth rate in your society and among your friends. Name the data
       layers you would use for your community and friends.

                                                                    (4 x 2) (8)
                                                                          [36]

SECTION D: SOLUTIONS TO HOMEWORK

QUESTION 1:   GIS

1.1.1 E√√
1.1.2 C√√
1.1.3 A√√   (3 x2) (6)

1.2   (Any two)
       Digitising maps√√
       Image processing√√
       Data management
       Spatial analysis   (2 x 2) (4)
1.3
1.3.1 Process of demarcating an area around a feature or an object√√
                                          (Concept)   (1 x 2) (2)
1.3.2 Create a buffer zone next to the coast where no development may
       take place√√   (Concept)   (1 x 2) (2)
1.4   Topographical map   (1 x 2) (2)
1.5   Check database to see if any clues left behind by the gang
       correspond with other crime scenes√√
       Check the crime scene and surroundings and see if there is a
       pattern √√
       Demarcate the areas within which the crime takes place
       Research the modus operandi of gangs that were involved in
       similar crimes.   (Any two – accept other reasonable answers).   (2 x 2) (4)
                                                                          [20]
QUESTION 2
2.1   The Gauss Conformal projection is an extract (smaller section) of
       Mercator's Cylindrical Projection   (1 x 2) (2)
2.2   (Any two)
       Position always constant√√, accurate direction shown√√, true bearing
       drawn accurately, shapes of coastlines accurately shown, small islands
       have their exact shape, reliable map to use for navigation.   (2 x 2) (4)

2.3

2.3.1 The data structure in which the wetland is stored allows us to see how different areas of the wetland are affected by pollution√√   (1 x 2) (2)

2.3.2 Vector√√ town planners can identify how pollutants affected different locations of the wetland√√ This allows planners to give information to municipalities about reducing pollution.   (2 x 2) (4)

2.3.3 Least vulnerable√√
Low vulnerability√√
Medium vulnerability√√
High vulnerability√√
Very high vulnerability√√   (5 x 2) (10)

2.4

2.4.1 The geographical feature and its relative location, referenced by using lines of latitude and longitude. √√   (1 x 2) (2)

2.4.2 Additional information about the feature. √√   (1 x 2) (2)

2.4.3 The location of information√√   (1 x 2) (2)

2.5 Educational Department: teenage pregnancy awareness programmes√√
Schools implementing teenage pregnancy awareness programmes√√
Learners exposed to teenage pregnancy awareness programmes√√
Communities (friends and wider society outside schools) informed of teenage pregnancy awareness by learners√√   (4 x 2) (8)
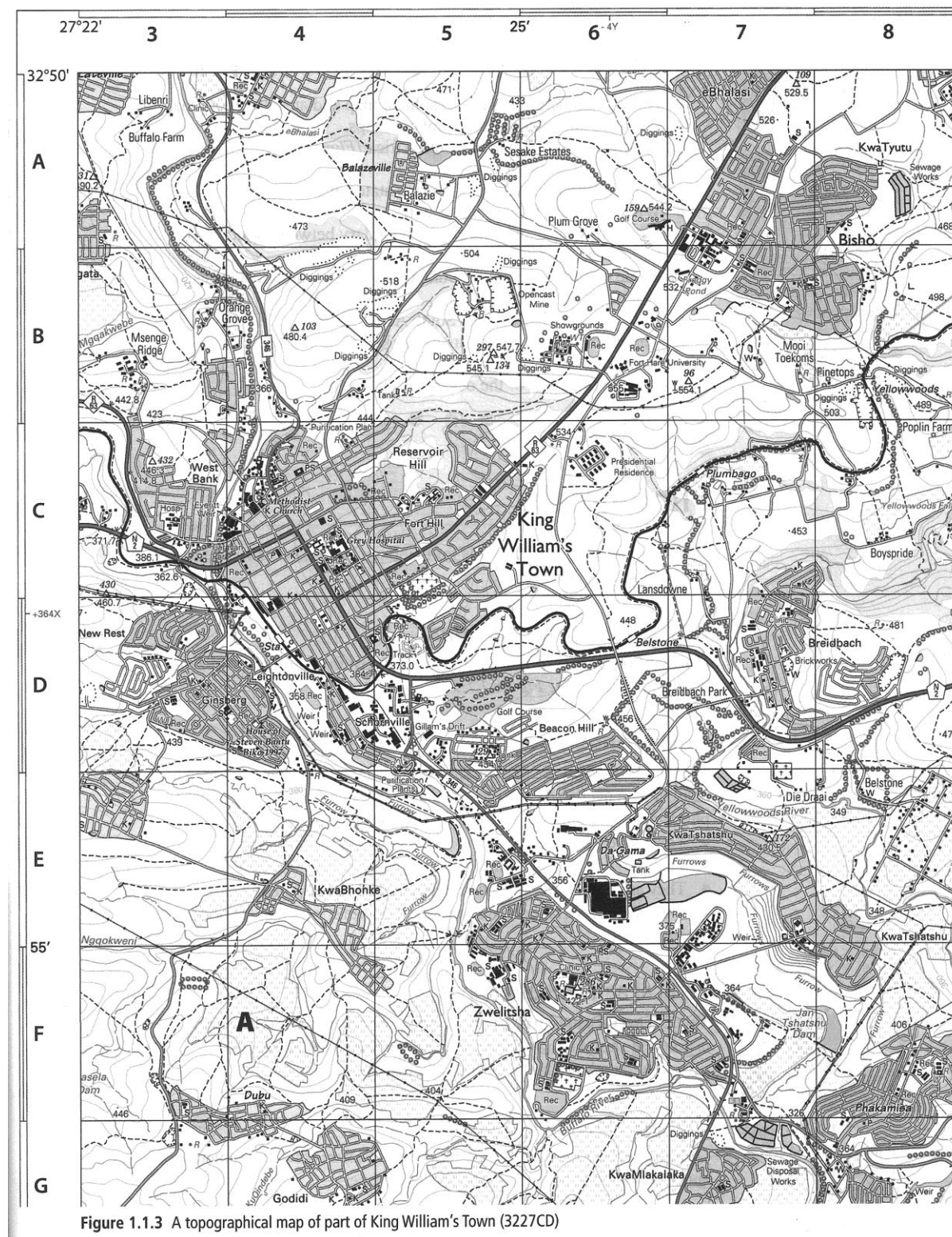
[36]

Annexure A

Figure 1.1.3 A topographical map of part of King William's Town (3227CD)
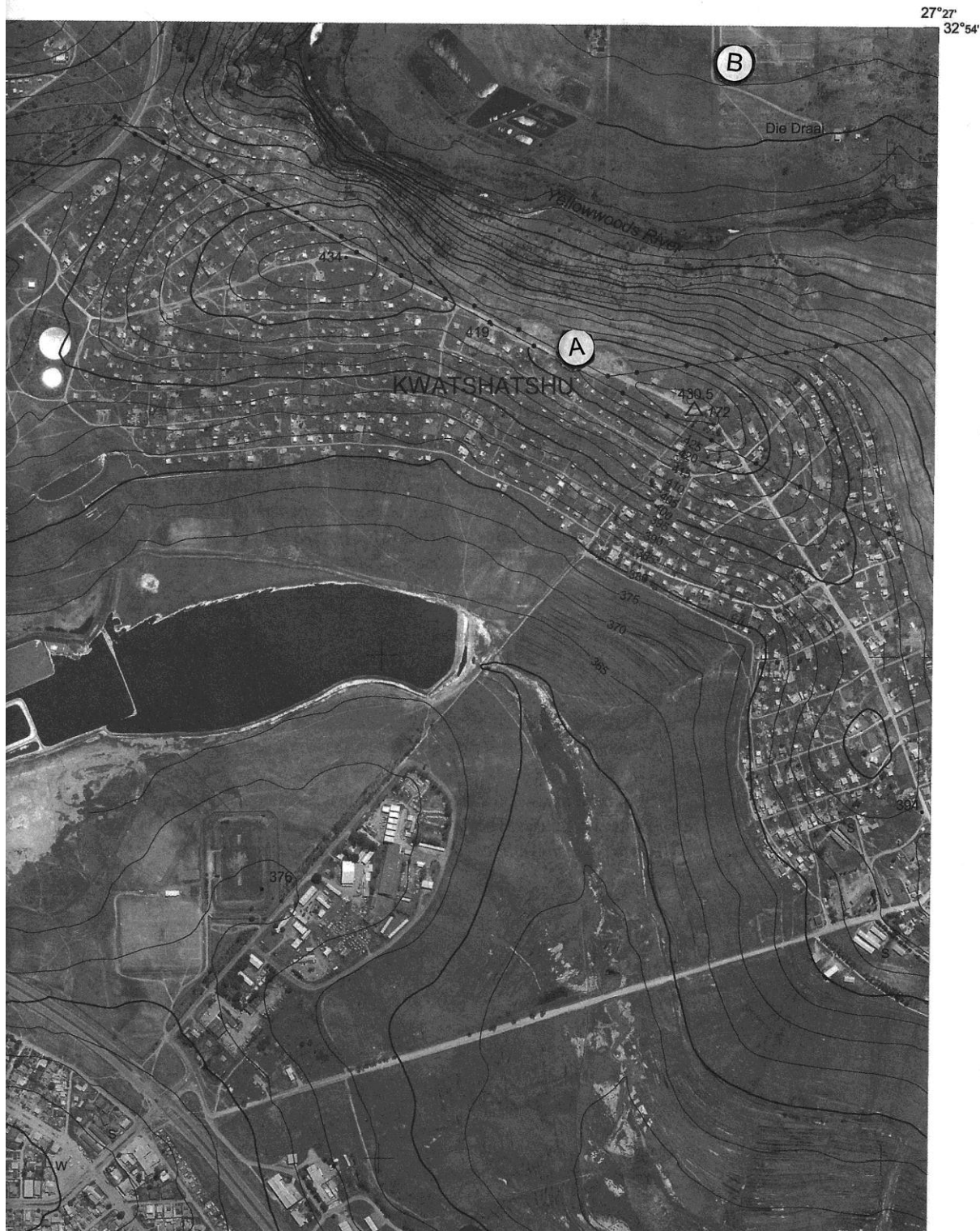
Figure 1.1.2 An orthophoto map of part of King William's Town (3227CD)