

**GEOGRAPHICAL ASSOCIATION OF WESTERN AUSTRALIA** [Inc.]

**Year 11 ATAR GEOGRAPHY**

**Unit 1**

**Semester 1, 2019**

**MARKING GUIDE**

**for**

**Teacher Use Only**

**Section One: Multiple-choice 20% (20 marks)**

**2.**

Each correct answer is worth **one (1)** mark.

|  |  |  |  |
| --- | --- | --- | --- |
| **Qu** | **Ans** | **Description** | |
| 1 | (b) | Comment | The map is 7 grid squares (7 km) across and 8 grid squares (8 km) north/south, therefore it covers an area of 56 square kilometres. |
| **Syllabus** | Apply the map scale to basic calculations to determine time, speed, distance and area. |
| 2 | (c) | Comment | The scale of the map in Source 1 is shown as a ratio above the line scale (1:25 000). At this scale, one centimetre on the map represents 25 000 centimetres on the ground, which is the same as 250m. |
| **Syllabus** | Interpret and express scale in written, linear and ratio (representative fraction) formats, and convert scale from one form to another. |
| 3 | (a) | Comment | Using the information provided on the border of Source 1, students can approximate the latitude and longitude of the motor racing track at AR 0360 is closest to 29° 16’ S 114° 59’ E. Other answers use a combination of eastings and northings or are back to front. |
| **Syllabus** | Establish position on a map using alphanumeric grid coordinates, easting and northings, four figure area references, six figure grid references and latitude and longitude expressed in degrees and minutes. |
| 4 | (c) | Comment | The symbol for exposed sand on the legend covers a larger portion of this grid square than any other portion. |
| **Syllabus** | Interpret marginal information represented on maps (title, conventional signs contained in the legend, north point, numerical and linear scale). |
| 5 | (a) | Comment | The general direction is east-southeast. |
| **Syllabus** | Establish direction on a map using general compass directions and bearings. |
| 6 | (d) | Comment | The general direction is just shy of southwest. A bearing of 220 degrees is closest to the correct bearing. |
| **Syllabus** | Establish direction on a map using general compass directions and bearings. |
| 7 | (c) | Comment | By looking at the legend the river can be identified as a non-perennial watercourse, the best description of this is alternative (c). |
| **Syllabus** | Interpret marginal information represented on maps (title, conventional signs contained in the legend, north point, numerical and linear scale).  Identify different relief features (landforms including hills, valleys, plains, spurs, ridges, escarpments, saddles, cliffs and hydrological features (land subject to inundation, perennial and intermittent water bodies). |
| 8 | (b) | Comment | Alternatives (a), (c), and (d) are all incorrect as they include some aspect of location (situation) or human element. Site refers to the physical features of a location, therefore only (b) contains site factors alone. |
| **Syllabus** | Describe the site and situations of places.  Identify, describe and interpret spatial patterns (including land use, settlement and transport), and spatial relationships between natural and cultural features on maps. |
| 9 | (c) | Comment | The distance is approximately 30 cm which equates to 7.5 km. 75km at 60 minutes (75 km/h) is the equivalent of 7.5 km in 6 minutes. |
| **Syllabus** | Apply the map scale to basic calculations to determine time, speed, distance and area. |
| 10 | (d) | Comment | Students will need to ascertain where on Source 1, features which can be observed on the eastern and western borders of Source 2 are located and align these to the nearest eastings identified in the question. |
| **Syllabus** | compare the different types of information available from remote sensing products with the information depicted on a topographic map.  Interpret the difference in scale between a photograph and a topographic map of the same place. |

|  |  |  |  |
| --- | --- | --- | --- |
| **Qu** | **Ans** | **Description**  **3.** | |
| 11 | (b) | Comment | The only way the ocean can be located on the right-hand side of Source 3, given that it is on the western side of Source 1 if the photograph was taken facing south. |
| **Syllabus** | Determine direction on remote sensing products. |
| 12 | (b) | Comment | Candidates need to determine where this feature is located and how it is represented on Source 1. They then need to use the legend to determine what it is, which is a runway – alternative (b). |
| **Syllabus** | use remote sensing products as an aid to interpreting natural and cultural features shown on topographic maps.  Interpret marginal information represented on maps (title, conventional signs contained in the legend, north point, numerical and linear scale). |
| 13 | (a) | Comment | All the Grid references given are locations of Caravan Parks on Source 1. Candidates need to accurately align location on Source 3 with the correct location on Source 1. |
| **Syllabus** | establish position on a map using alphanumeric grid coordinates, eastings and northings, four figure area references, six figure grid references.  Identify and describe natural and cultural features and their patterns on the Earth’s surface using ground level photographs, aerial photographs (vertical and oblique), radar imagery and satellite imagery (Landsat, weather satellites and Google Earth). |
| 14 | (d) | Comment | Definition as found in the glossary of the SCSA syllabus documents. |
| **Syllabus** | ecological hazards, including environmental diseases/pandemics (toxin-based respiratory ailments, infectious diseases, animal-transmitted diseases and water-borne diseases) and plant and animal invasions. |
| 15 | (b) | Comment | Definition as found in the glossary of the SCSA syllabus documents. |
| **Syllabus** | the concept of hazard geography. |
| 16 | (c) | Comment | Definition as found in the glossary of the SCSA syllabus documents. |
| **Syllabus** | the concepts of risk and hazard management as applied to natural and ecological hazards |
| 17 | (d) | Comment | Candidates will need to accurately determine which line graph was at the highest point in the year 2000. |
| **Syllabus** | ecological hazards, including environmental diseases/pandemics (toxin-based respiratory ailments, infectious diseases, animal-transmitted diseases and water-borne diseases) and plant and animal invasions  Interpret and construct tables and graphs, including: picture graphs; line, bar and compound graphs; histograms; scattergrams; climatic graphs; pie graphs; flowcharts and population pyramids. |
| 18 | (a) | Comment | Candidates need to recognise that if the strong downward trend in the green HIV/AIDS graph continues, it will dip below the red malaria line within the next five years. (Note: the question states ‘based on the data and trends presented’). |
| **Syllabus** | extrapolate trends over time to forecast future conditions. |
| 19 | (a) | Comment | A careful analysis of the maps and the categories presented will show the alternatives (b), (c) and (d) all contain some incorrect statements. Only (a) correct statements from each map. |
| **Syllabus** | interpret and apply data from different types of statistical maps (isopleth/isoline maps, choropleth maps, proportional circle maps, overlay and dot distribution maps)  access databases, such as Australian Bureau of Statistics, and Bureau of Meteorology, for spatial and statistical information. |
| 20 | (d) | Comment | (b) and (c) incorrect as these concepts apply to both natural and ecological hazards. (a) incorrect as exposure is largely determined by cultural and economic factors. |
| **Syllabus** | the spatial and temporal distribution, magnitude, duration, frequency, probability and scale of spatial impact of natural and ecological hazards at a global scale. |

**4.**

**NOTE:**

**Some element of teacher discretion will be required for the allocation of marks for some questions, with specific reference to the quality of the answer.**

**Section Two: Short response 40% (40 marks)**

Refer to **Source 1** Dongara topographic map 2014 to answer Questions 21 and 22.

**Question 21 (2 marks)**

Describe **two (2)** characteristics of the situation of the waste water processing/sewage treatment plant located at GR 001606.

**Syllabus:**

Describe the site and situations of places.

**Key word:**

Describe: provide characteristics and features.

**Teacher Notes:**

Situation can be described by referring to the location of a place in relation to its surroundings or its proximity to other places or features. Situation characteristics should be described accurately in a full sentence, using appropriate geographical terminology. Can include:

* Distance and direction from other settlements, major features or major transport intersections. E.G. 2 km south east of the Dongara town centre (Depending if measured from edges or centre), 2.75 km east, north east of Port Denison Beacon, 1.6 km west of railway line.
* Latitude and longitude, E.g. 29° 16’ S 114° 55/56’ E.
* Location in relation to or on major transport routes. E.g. 1.5 km east along Blenhem Road.

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Correctly describes any **one (1)** situation characteristic (e.g. latitude and longitude, distance and direction from other places or features, location in relation to major transport routes). | 1 |
| Correctly describes any **one (1) other** situation characteristic (e.g. latitude and longitude, distance and direction from other places or features, location in relation to major transport routes). | 1 |
| **TOTAL** | **2** |

**Question 22 (8 marks)**

1. In the frame below, draw a sketch map of the area on Source 1 bordered by Easting 970 to the west, Easting 994 to the east, Northing 590 to the south and Northing 610 to the north. Include any map conventions not already present.

(2 marks)

**5.**

**Syllabus:**

construct simple annotated sketch maps using map conventions (border, title, legend, north point and approximate scale)

**Key word:**

Draw: an instruction, as in draw a circle

**Teacher Notes:**

Students should apply their knowledge of drawing simple annotated sketch maps to complete the map. This should be done as accurately as possible. Border, scale (size of frame), and legend are already provided. Title and North Point should be added.

**Example:**

**Port Denison Sketch Map**

****

N

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Correctly draws the sketch map to an accurate level in relation to the correct placement and scale of the coastline and general features. Includes the required map conventions. | 2 |
| Correctly draw the sketch map to an accurate level in relation to the correct placement and scale of the coastline and general features. Does not include the required map conventions. **OR**  Draws a sketch map with a limited degree of accuracy. May include the required map conventions. | 1 |
| **TOTAL** | 2 |

**Question 22 (8 marks)**

(b) Locate and label the following features on your sketch by using appropriate symbols or colours and complete the key below.

(6 marks)

i. Kailis Drive ii. the golf course iii. the industrial area

iv. the groynes v. the urban area vi. the area of reef that is awash

**6.**

**Note: Refer sketch map above for key symbols.**

**Syllabus:**

construct simple annotated sketch maps using map conventions (border, title, legend, north point and approximate scale).

**Key word:**

Label: Identify by placing (a symbol or colour)

**Teacher Notes:**

Students should apply their knowledge of drawing simple annotated sketch maps to complete the map. The features listed should be located and labelled as accurately as possible.

**Marking Key:**

|  |  |
| --- | --- |
| Correctly locates and labels all six (6) features and uses an appropriate key: | 6x1 |
| Correctly locates and labels all six (6) features, but fails to provide a key. | 3x1 |
| **TOTAL** | **6** |

**Question 23 (2 marks)**

Locate and describe **one (1)** example of a change in land use that can be observed in **Source 2** when compared to **Source 1**.

**7.**

**Syllabus:**

use combinations of remote sensing products and topographic maps to provide information based on change over time

**Key word:**

Locate: indicates where on the topographic map the feature is located, typically by using an Area Reference or Grid Reference or making reference to transport links, distance and direction from a significant feature.

Describe: provides characteristics and features.

**Teacher Notes:**

Examples of land use change include:

* Southward and eastward expansion of waste water processing and sewage treatment plant located at GR 001607. New ponds to the east and establishment of perimeter fencing or track to the south.
* Expansion of built up area/buildings south west of Kailis Drive in the vicinity of GR 977593. Previously was ‘Park or reserve’, now some long, narrow orange roofed buildings can be seen.
* West of Springfield Road in AR 0060 and AR0059, more buildings, fence lines and tracks appear to be present in Source 2 than Source 1.

Teacher discretion needed for other locations and features identified by candidates.

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Correctly locates, using a relevant method, a feature that is evident in Source 2, which is not included on Source 1. | 1 |
| Correctly describes the nature of the area/feature that has been identified as an example of change. Typically identifies before and after. | 1 |
| **TOTAL** | **2** |

**8.**

**Question 24 (2 marks)**

With the aid of **Source 1 and Source 2**, describe the spatial relationship that can be observed between settlement/land use and topography in the area east of the Golf Course and west of Springfield road compared to the area east of Springfield Road.

**Syllabus:**

identify, describe and interpret spatial patterns (including land use, settlement and transport), and spatial relationships between natural and cultural features on maps

use remote sensing products as an aid to interpreting natural and cultural features shown on topographic maps

**Key word:**

Describe: provides characteristics and features.

Spatial relationship: the relationship between the distribution patterns of different phenomena on the Earth’s surface.

**Teacher notes:**

Whilst the term ‘spatial association’ is found in the syllabus glossary, the term ‘spatial relationships’ appears more commonly in the syllabus dot points. Candidates should be expressing how the topography of the two areas identified differs and how this has possibly influenced the settlements/land use in the two areas.

Answers could include:

* Flatter land (lack of contours) to the east of Springfield Drive has resulted in a higher concentration of buildings, transport links, fence lines and smaller property sizes.
* In the area identified west of Springfield Road, the land appears to be more undulating (more contours present) and there is less land cleared, less buildings, less transport/fences and larger property sizes

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Thoroughly describes how settlements/land use and topography are interrelated to each other to form the patterns observed, either side of Springfield Road. Uses Area Reference and Grid References to locate examples of patterns mentioned. Full sentences are used. | 2 |
| States how urban settlements/land use and topography are interrelated to each other to form the patterns observed. Does not use Area Reference and Grid References to locate examples of patterns mentioned. **OR,**  Simply states where urban settlements/land uses are located and states where various variations in topography are seen but does not state their interrelationship. | 1 |
| **TOTAL** | **2** |

**9.**

Refer to **Source 3** Dongara oblique aerial photograph 2011 to answer Question 25.

**Question 25 (2 marks)**

Identify and locate **one (1)** piece of evidence from **Source 3** that would suggest that the population of the town of Dongara is growing.

**Syllabus:**

identify and describe natural and cultural features and their patterns on the Earth’s surface using ground level photographs, aerial photographs (vertical and oblique), radar imagery and satellite imagery (Landsat, weather satellites and Google Earth)

**Key word:**

Identify: recognise and name.

**Teacher Notes:**

In the foreground of the photograph there is an area of new roads and some housing with large areas of cleared land with no constructions or buildings present. This would appear to be an area of new urban growth or expansion, indicating a demand for housing and therefore population increase.

NOTE: the answer should be based on evidence from the photograph and not on prior knowledge or insight.

Teacher discretion needed for other evidence or features identified by candidates.

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Correctly identifies and locates, by referring to location on the photograph, a logical or credible piece of evidence to indicate that the population of the town is increasing. | 2 |
| States a piece of evidence on the photograph without locating it or clearly identifying the link to population increase. | 1 |
| **TOTAL** | **2** |

**10.**

**Question 26 (4 marks)**

Define the following terms and give an example of each.

Atmospheric hazards

Hydrological hazards

**Syllabus:**

the nature of natural and ecological hazards with particular reference to:

* classification of natural hazards (atmospheric, hydrological and geomorphic)

**Key word:**

Define: state meaning and identify essential qualities.

Atmospheric hazards: those hazards that involve weather and climate and are driven by natural processes in the Earth’s atmosphere

Hydrological hazards: those hazards that are driven by hydrological process in the water cycle

**Teacher notes:**

Examples of Atmospheric hazards – storms, tropical storms (tropical cyclones, hurricanes, typhoons), tornadoes, frosts, heat waves, bushfires, floods

Examples of Hydrological hazards – floods, droughts, avalanches, blizzards

Teacher discretion needed for other examples identified by candidates.

NOTE: Many hydrological hazards can also be classified as atmospheric or induced by geomorphic and human actions. Hydrological hazards essentially involve water and examples given must be able to be linked to the water cycle, even though in some instances other factors may be able to cause the type of hazard identified.

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| **2 x 2 marks** |  |
| Includes a correct definition of the hazard type and a correct example. | 2 |
| Only includes a correct definition of the hazard type **OR** a correct example, not both. | 1 |
| **TOTAL** | **2** |

**11.**

**Question 27 (4 marks)**

Identify **two (2)** different natural hazards and describe the nature of each hazard.

**Syllabus:**

the nature of natural and ecological hazards with particular reference to:

* examples of natural hazards, including storms, cyclones, hurricanes, typhoons, tornadoes, frosts, droughts, bushfires, flooding, earthquakes, volcanoes and landslides

**Key word:**

Identify: Recognise and name

Describe: provide characteristics and features.

**Teacher Notes:**

Candidates should identify (name) the hazard in the space provided and then give a description of its nature. Points could include a general description of what it is, its type (classification), typical location and size (spatial distribution), when it occurs and duration (temporal distribution), magnitude and general impacts.

Teacher discretion needed for other relevant points.

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| **2 x 2 marks** |  |
| A natural hazard is identified and a thorough and concise description is provided detailing the nature of this hazard. Correctly uses geographical terminology and full sentences. | 2 |
| A natural hazard is identified and a description is attempted detailing some relevant points. Geographical terminology not evident and poor sentence structure or dot points used. | 1 |
| **TOTAL** | **4** |

**12.**

**Question 28 (4 marks)**

Identify **two (2)** different ecological hazards and describe the nature of each hazard.

**Syllabus:**

the nature of natural and ecological hazards with particular reference to:

* ecological hazards, including environmental diseases/pandemics (toxin-based respiratory ailments, infectious diseases, animal-transmitted diseases and water-borne diseases) and plant and animal invasions

**Key word:**

Identify: Recognise and name

Describe: provide characteristics and features.

**Teacher Notes:**

Candidates should identify (name) the hazard in the space provided and then give a description of its nature. Points could include a general description of what it is, its type (classification), typical location and size (spatial distribution), when it occurs and duration (temporal distribution), magnitude and general impacts.

Teacher discretion needed for other relevant points.

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| **2 x 2 marks** |  |
| An ecological hazard is identified and a thorough and concise description is provided detailing the nature of this hazard. Correctly uses geographical terminology and full sentences. | 2 |
| An ecological hazard is identified and a description is attempted detailing some relevant points. Geographical terminology not evident and poor sentence structure or dot points used. | 1 |
| **TOTAL** | **4** |

**13.**

Refer to **Source 4:** Short-term and long-term activities within the hazard management cycle to answer Question 29.

**Question 29 (6 marks)**

Explain how **one (1)** of the factors listed as Short-term action and **one (1)** of the factors listed as Long-term action on **Source 4** may contribute to the management of hazards.

**Syllabus:**

interpret and construct tables and graphs, including: picture graphs; line, bar and compound graphs; histograms; scattergrams; climatic graphs; pie graphs; flowcharts and population pyramids

use system and flow diagrams to organise thinking about relationships systems

the concepts of risk and hazard management as applied to natural and ecological hazards

**Key word:**

Explain: relate cause and effect; make the relationships between things evident; provide why and/or how

Mitigation the ability to moderate the severity of a hazard or similarly adverse occurrence.

Prevention: the act of keeping from happening, taking precautionary action.

Preparedness: ensuring a satisfactory level of readiness and an awareness of how to respond during a hazard event.

Response: to react to an event or action.

Recovery: restoration to a former or better condition.

**Teacher Notes:**

Mitigation and prevention go together, (hence linked on the diagram). They are steps taken either before a potential hazard turns into a crisis/disaster or in response to an event that has occurred with the belief that another event is likely to occur, (hence position on diagram).

The measures taken act to lessen the impact of the chosen event by either preventing the event itself from occurring or taking precautionary measure to lessen the size of the impacts, either spatially, temporally or in various numerical measures.

Preparedness are the measures taken before an event by government agencies and individuals to make the community and those directly involved aware of the risks, organised for an event and aware of how to respond.

Response refers to the **initial actions** taken after a hazard event has occurred. ‘First responders’ is a common term used for the emergency services personnel, rescuers, medical and others in command of logistical and operational matters.

Recovery refers to the **longer-term actions** and measures taken to restore the area and structures impacted by the hazard back to the pre-existing or improved level of functionality.

A good answer will make reference to the Source. Candidate may refer to one of the factors in the white arrows in detail or one of the four factors in the boxes in more general terms.

**14.**

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| **2 x 3 marks** |  |
| Correctly explains the meaning of the factor chosen and how the typical actions associated with it contribute to the management of hazards. Refers to the source and specific supporting evidence and examples of hazard events to strengthen the explanation. Relevant geographical terminology and full sentences are used. | 3 |
| Explains the meaning of the factor chosen and how it contributes to the management of hazards. Refers to the source and some supporting evidence and examples of hazard events to strengthen the explanation. Geographical terminology and full sentences are used. | 2 |
| Limited explanation of the how the factor chosen contributes to the management of hazards. The source is not referred to few if any examples of hazard events are used to strengthen the explanation. Limited use of geographical terminology, full sentences and poor literacy skills may contribute to a response that is difficult to understand. | 1 |
| **TOTAL** | **6** |

Refer to **Source 7:** Global hazards mortality risk distribution and **Source 8:** Global hazards total economic loss risk distribution to answer Question 30.

**Question 30 (6 marks)**

Referring to specific locations or regions shown on **Sources 7** and **8,** explain **two (2)** factors that have contributed to the patterns of mortality risk distribution and economic loss risk distribution shown.

**Syllabus:**

Interpret and apply data from different types of statistical maps (isopleth/isoline maps, choropleth maps, proportional circle maps, overlay and dot distribution maps)

The spatial and temporal distribution, magnitude, duration, frequency, probability and scale of spatial impact of natural and ecological hazards at a global scale

**Key word:**

Explain: Relate cause and effect; make the relationships between things evident; provide why and/or how

**Teacher Notes:**

A number of general patterns can be observed (though exceptions may exist):

* Less developed countries and regions tend to experience a higher mortality risk, such as Sub-Saharan Africa, Central America, parts of the Middle East and parts of Central and Southeast Asia.
* More developed countries and regions tend to experience higher risk of economic loss, such as North America, Europe, Australia, parts of the Middle East and parts of Central and South-east Asia.
* Some regions experience both high mortality risk and high economic risk, such as Central America, west coast South America, japan, southeast Brazil, parts of the Middle East and parts of Central and South-east Asia.

**15.**

Factors/reasons for the first two trends could include low or high levels of: economic development/wealth and the associated value of assets and infrastructure, medical supplies and knowledge, ability of early detection, quality of infrastructure (particularly transport, communication and utilities), demographic profile, hazard and emergency management policies, education and support services, climate, location of settlements, population density, level of urbanisation, build quality and density of settlements and land use.

The above factors may contribute to the third trend in addition to the fact that most locations which experience high levels of mortality and economic risk tend to be found in sub tropical zones and near plate boundaries where the potential for geomorphic, atmospheric, hydrological and ecological hazards associated with infectious diseases are all high and therefore the risk factors are high.

Teacher discretion needed for other examples identified and relevant explanations given by candidates.

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| **2 x 3 marks** |  |
| Correctly identifies a factor and clearly explains how it has contributed to a pattern shown on the sources, demonstrating an understanding of the factors contributing to risk and the nature of the regions referred to. A range of appropriate supporting evidence and examples are used to strengthen the explanation, including reference to the source. Relevant geographical terminology and full sentences are used. | 3 |
| Identifies a factor and explains how it has contributed to a pattern shown on the sources, demonstrating some understanding of the factors contributing to risk and the nature of the regions referred to. Some supporting evidence and examples are used to strengthen the explanation, including reference to the source. Geographical terminology and full sentences are used. | 2 |
| May identify a factor, but provides a limited explanation of how it has contributed to a pattern shown on the sources, demonstrating little, if any, understanding of the factors contributing to risk and the nature of the regions referred to. Limited use of geographical terminology, full sentences and poor literacy skills may contribute to a response that is difficult to understand. | 1 |
| **TOTAL** | **6** |

**16.**

**Section Three: Extended response 40% (40 marks)**

**PART A: Depth Study 1 Answer either Question 31 or Question 32 20% (20 Marks)**

**Question 31 (20 marks)**

1. Describe the typical locations and causes of a natural hazard you have studied.

(8 marks)

**Syllabus:**

* the nature and causes of the hazard.
* the spatial and temporal distribution of the hazard [and how an understanding of biophysical and human processes can be used to explain the patterns that are identified – not required for this question]

**Key word:**

Describe: provide characteristics and features.

**Teacher Notes:**

Due to the scope of depth studies that can be used in this unit the teacher will have to use their discretion when deciding if the student’s answer supports the question.

**Location of** can refer to: typical locations where the hazard occurs across the globe and the characteristics of these locations. E.g. the tropics, plate boundaries, mid latitudes and others as appropriate.

**Causes of** can refer to: the source of the hazard, how the hazard is generated, physical factors and any significant human factors that may contribute to the occurrence of the hazard.

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| A detailed and comprehensive description is given and accurate information is provided on both the typical locations and causes of a natural hazard. A wide range of appropriate supporting evidence and examples are used to develop and strengthen the description. The accurate use of relevant geographical terminology and concepts helps to develop a cohesive, concise and articulate answer, with well-developed sentences and paragraphs in an extended answer format. | 7-8 |
| An appropriate description is given and general, relatively accurate information is provided on both the typical locations and causes of a natural hazard. A range of appropriate supporting evidence and examples are used to develop and strengthen the description. Relevant geographical terminology and concepts helps to develop a cohesive and detailed answer, with well-developed sentences and paragraphs in an extended answer format. | 5-6 |
| A limited description is given and some generalised information is provided on both the location and causes of a natural hazard. Limited evidence is used to support statements and generalisations. There is limited use of geographical terminology and concepts in a largely unstructured response. | 3-4 |
| A very basic description is given and little information is provided on the location **or** causes of a natural hazard. Insufficient evidence is presented in the description. There is limited or no use of geographical terminology and concepts, and poor literacy skills may contribute to a response that is difficult to understand. | 1-2 |
| No relevant attempt. | 0 |
| **TOTAL** | **8** |

**Question 31 (20 marks)**

1. Identify **two (2)** stakeholder groups affected by a natural hazard you have studied and evaluate their values and viewpoints on recovery and adaptation measures undertaken.

(12 marks)

**17.**

**Syllabus:**

The stakeholders affected by the hazard and their values and viewpoints on recovery and adaptation to future hazards in terms of modifying:

* human vulnerability (susceptibility to future loss)
* loss burden (cost of loss mitigation and adaptation)

**Key word:**

Identify: recognise and name.

Evaluate: to ascertain the value or amount of; appraise carefully.

Stakeholders: a group or organisation that has interest or concern in an event, process or activity.

Values: a judgement of what is important to an individual or group in a given situation. Important beliefs or ideals shared by a group about what are good, bad or desirable outcomes.

Viewpoints: a way of looking at or thinking about something.

Recovery: the longer-term measures taken to rebuild a community after a hazard event or disaster has occurred.

Adaptation: alteration or adjustment in response to a changed environment.

**Teacher Notes:**

Due to the scope of depth studies that can be used in this unit the teacher will have to use their discretion when deciding if the student’s answer supports the question.

**Stakeholders:** Students will need to identify and name **two (2)** different stakeholder groups, along with a brief description of who they are, what they do and the nature of their stake in the scenario. An extremely strong case would have to be presented by the candidate to accept an individual as a stakeholder. Terms such as ‘the residents’ and ‘the citizens’ are also generally accepted as too general, as opinions can vary throughout such broad groups.

Whilst it would be preferable (and a better structured answer) to present two differing sets of values and viewpoints, the syllabus dot point and question does not explicitly require this.

Examples of stakeholders could include:

* local aid workers
* international aid workers and agencies
* environmental groups and agencies
* village council
* local governments and councils
* regional, state and federal governments and departments
* United Nations agencies
* Doctors Without Borders (Medecins Sans Frontieres)
* occupational related groups, e.g. local farmers, mine owners, utility suppliers
* others as relevant to the specific natural hazard studies.

**18.**

**Values and Viewpoints:** In evaluating values and viewpoints, candidates should state the stakeholder groups’ role in, or connection to the affected area. Are they local to the area? Are they involved or connected on a permanent or temporary basis? Is their presence permanent or transitory?

Discussion should include their value and viewpoints on a number of recovery measures and adaptation strategies that could be or are being applied in response to the natural hazard being examined. A clear understanding of the meanings of recovery and adaptation in response to the natural hazard should be demonstrated. More than one recovery and one adaptation measure should be referred to.

An evaluation should include an assessment on the value or usefulness of their viewpoint.

Another way of looking at stakeholders values and viewpoints is to outline whether the stakeholders’ values and viewpoints in regard to recovery and adaptation can be classified as *proactive*, *reactive* or *fatalistic*. Whether candidates refer to these terms will be a reflection on the approach taken in the classroom.

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Identification of a specific natural hazard and of **two (2)** different stakeholder groups is made. Thorough descriptions of the nature of their role and stake are provided. A detailed and comprehensive evaluation of the values and viewpoints of each stakeholder group in relation to a number of recovery measures and adaptations undertaken for the natural hazard is presented. A wide range of appropriate supporting evidence and specific examples are used to develop and strengthen the evaluation. The accurate use of relevant geographical terminology and concepts helps to develop a cohesive, concise and articulate answer, with well-developed sentences and paragraphs in an extended answer format. | 11-12 |
| Identification of a specific natural hazard and of **two (2)** different stakeholder groups is made. Accurate descriptions of the nature of their role and stake are provided. A detailed evaluation of the values and viewpoints of each stakeholder group in relation to a number of recovery measures and adaptations undertaken for the natural hazard is presented. A range of supporting evidence and specific examples are used to develop and expand the evaluation. Relevant geographical terminology and concepts help to develop a cohesive and detailed answer, with well-developed sentences and paragraphs in an extended answer format. | 9-10 |
| Identification of a specific natural hazard and of **two (2)** different stakeholder groups is made. General descriptions of their role and stake are provided. An appropriate evaluation of the values and viewpoints of the stakeholders in relation to recovery from and adaption undertaken for the natural hazard is presented. Some supporting evidence is used to develop the evaluation. Geographical terminology and concepts are applied to construct a response, which shows some detail, but may have difficulty articulating ideas. | 6-8 |
| Identifies a specific natural hazard, however, possibly identifies only **one (1)** of **two (2)** different stakeholder groups. Limited or non-existent descriptions of their role and stake are given. Limited evaluation, probably only a description, of their values and viewpoints in relation to recovery and adaption undertaken for the natural hazard is presented. Limited evidence is used to support statements and generalisations. There is limited use of geographical terminology and concepts in a largely unstructured response. | 3-5 |
| Possibly identifies a natural hazard, however, identifies only **one (1)**, if any, stakeholder groups. Descriptions of their role and stake not given. Possibly a short description of their values and viewpoints. Insufficient evidence is used to support statements and generalisations. There is limited use of geographical terminology and concepts, and poor literacy skills may contribute to a response that is difficult to understand. | 1-2 |
| No relevant attempt. | 0 |
| **TOTAL** | **12** |

**Question 32 (20 marks)**

1. Describe **two (2)** ways in which the activities of people can intensify the impacts of a natural hazard you have studied.

(8 marks)

**19.**

**Syllabus:**

the means by which the activities of people can intensify the impacts of the hazard.

**Key word:**

Describe: provide characteristics and features.

**Teacher Notes:**

Due to the scope of depth studies that can be used in this unit the teacher will have to use their discretion when deciding if the student’s answer supports the question.

Students will need to clearly identify their chosen natural hazard. A good answer will demonstrate understanding of the phrase ‘intensify the impacts of’ in relation to their chosen natural hazard.

**Human activities** may include the following where relevant:

* Nature and location of human settlements - Materials used in construction of associated buildings and structures. Construction by-laws. Density of human settlement. Increasing population density and urbanisation. Location in relation to aspects of the physical environment and climate characteristics that may intensify the impact of the hazard.
* Activities associated with and the nature of agricultural practices – such as clearing of land, irrigation infrastructure and practices, alteration to microclimate.
* Activities associated with and the nature of mineral extraction practices – such as clearing of land, water management practices and alteration to microclimate.
* Large scale human activities which may influence climate change and the intensity of atmospheric hazards.
* Management practices associated with forest reserves and bushland areas.
* Deforestation and land clearing.
* The quality of infrastructure and utility supplies – water supply infrastructure (collection, storage, distribution), water treatment, sewage infrastructure/plants, storm water drainage, transport infrastructure, power supply infrastructure.
* The quality of emergency response and medical infrastructure, knowledge and supplies.
* General population’s education and knowledge of potential causes and impacts associated with the natural hazard.
* Others not mentioned may be relevant to specific natural hazards.

**Refer over page for marking key.**

**20.**

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| A detailed and comprehensive description is given and accurate information is provided about the ways in which the activities of people can intensify the impacts of a natural hazard. Both the human activities and the intensity and nature of the impacts are described. A wide range of appropriate supporting evidence and examples are used to develop and strengthen the description. The accurate use of relevant geographical terminology and concepts helps to develop a cohesive, concise and articulate answer, with well-developed sentences and paragraphs in an extended answer format. | 7-8 |
| A concise description is given and accurate information is provided about the ways in which the activities of people can intensify the impacts of a natural hazard. Some description of the human activities and the intensity and nature of the impacts is presented. A range of appropriate supporting evidence and examples are used to develop and strengthen the description. Relevant geographical terminology and concepts helps to develop a cohesive and detailed answer, with well-developed sentences and paragraphs in an extended answer format. | 5-6 |
| A limited description is given and generalised information is provided about the ways in which the activities of people can intensify the impacts of a natural hazard. Little description of the human activities and the intensity and nature of the impacts is presented. Limited evidence is used to support statements and generalisations. There is limited use of geographical terminology and concepts in a largely unstructured response. | 3-4 |
| A very basic description is given about the ways in which the activities of people can intensify the impacts of a natural hazard (or just hazards in general). Insufficient evidence is presented in the description. There is limited or no use of geographical terminology and concepts, and poor literacy skills may contribute to a response that is difficult to understand. | 1-2 |
| No relevant attempt. | 0 |
| **TOTAL** | **8** |

NOTE: If only one (1) activity is described a maximum of four marks is to be awarded.

**21.**

**Question 32 (20 marks)**

1. Evaluate the sustainability of risk management policies and practices, deployed in both the short and long term, designed to reduce the impacts of a natural hazard you have studied.

(12 marks)

**Syllabus:**

the sustainability of risk management policies, procedures and practices designed to reduce the impacts of the hazard, in the short and long term, through prevention, mitigation and preparedness

**Key word:**

Evaluate: to ascertain the value or amount of; appraise carefully.

Sustainability: Meeting the needs of current and future generations through simultaneous environmental, social and economic adaptation and improvement.

**Teacher Notes:**

Due to the scope of depth studies that can be used in this unit the teacher will have to use their discretion when deciding if the student’s answer supports the question.

Whilst not referred to or required in the question, (as is the practice of SCSA in recent years in the extended answer questions), candidates may use information and terminology found in Source 4 to strengthen their answer, as per instructions on page 2 of the exam booklet.

Candidates should define or briefly describe the nature of sustainability. Risk management policies (plans) and practices (actions taken), for a natural hazard they have studied, should be described in order to evaluate their level of sustainability. These plans and policies may be produced by various levels of government, risk management authorities (such as FESA), NGO’s or international agencies such as the United Nations of World Health Organisation. Sustainability throughout ATAR Units 1 – 4 is measured against the three pillars of sustainability - Environmental, Social and Economic sustainability. The sustainability of policies and practices should be evaluated against these three pillars and their ability to meet the needs of current and future generations.

Aspects to be considered may include:

**Environmental** – do the procedures and practices, impact other aspects of the environment such as species, habitats, water supplies, coastlines and air quality?

**Economic** – are the measures affordable for the intended country, region, community or individuals affected? Are the costs involved sustainable in the short term and long term? Can governments, NGO’s and individuals afford the ongoing procedures and practices?

**Social** – are the procedures and practices available and affordable to all individuals and communities in need of their application, both now and into the future?

**Refer over page for marking key.**

**22.**

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| A detailed and comprehensive evaluation of relevant risk management policies and practices is given for the chosen natural hazard. Complete and accurate information is provided about the nature of the policy or practices and the agencies involved. The evaluation is made against the three pillars of sustainability and the ability of the policies and practices to meet the needs of current and future generations in the area(s) affected by the hazard. A wide range of appropriate supporting evidence is used to develop and strengthen the evaluation. The accurate use of relevant geographical terminology and concepts helps to develop a cohesive, concise and articulate answer, with well-developed sentences and paragraphs in an extended answer. | 11-12 |
| A detailed evaluation of relevant risk management policies and practices is given for the chosen natural hazard. Accurate information is provided about the nature of the policy or practices and the agencies involved. The evaluation is made against the three pillars of sustainability and the ability of the policies and practices to meet the needs of current and future generations in the area(s) affected by the hazard. A range of appropriate supporting evidence is used to develop and strengthen the evaluation. The accurate use of relevant geographical terminology and concepts helps to develop a cohesive and detailed answer, with well-developed sentences and paragraphs in an extended answer. | 9-10 |
| An appropriate evaluation of a relevant risk management policy and practices is given for the chosen natural hazard. General, relatively accurate information is provided about the nature of the policy or practices and the agencies involved. The evaluation is made against the three pillars of sustainability and the ability of the policies and practices to meet the needs of current and future generations in the area(s) affected by the hazard. Some supporting evidence is used to develop the evaluation. Geographical terminology and concepts are applied to construct a response, which shows some detail, but may have difficulty articulating ideas. | 6-8 |
| A limited evaluation, more likely a description, of a relevant risk management policy or practice is given for the chosen natural hazard. Some generalised information is provided about the nature of the policy or practice. The three pillars of sustainability and the ability of the policy or practice to meet the needs of current and future generations in the area(s) affected by the hazard are only partially referred to. Limited evidence is used to support statements and generalisations. There is limited use of geographical terminology and concepts in a largely unstructured response. | 3-5 |
| A basic description, of a relevant risk management policy or practice is given for the chosen natural hazard. Insufficient information is provided about the nature of the policy or practice. The three pillars of sustainability and the ability of the policy or practice to meet the needs of current and future generations in the area(s) affected by the hazard are not referred to. Insufficient evidence is used to support statements and generalisations. There is limited use of geographical terminology and concepts, and poor literacy skills may contribute to a response that is difficult to understand. | 1-2 |
| No relevant attempt. | 0 |
| **TOTAL** | **12** |

**23.**

**PART B: Depth Study 2 Answer either Question 33 or Question 3420% (20 Marks)**

**Question 33 (20 marks)**

(a) Describe the nature of the risks to be managed for an ecological hazard you have studied in relation to:

* the impacts on physical and mental health and
* the effects on the economy.

(8 marks)

**Syllabus:**

the nature of the risks to be managed, such as:

* loss of property/life
* effects on infrastructure, jobs and the economy
* the impact on physical and mental health

**Key words:**

Describe: provide characteristics and features.

**Teacher Notes:**

Due to the scope of depth studies that can be used in this unit the teacher will have to use their discretion when deciding if the student’s answer supports the question.

The way the word risk is used in this syllabus dot point appears to be equating risk with the nature of the potential impacts. As it is the second of a series of dot points introducing the ecological hazard, (lower order concepts), the emphasis is taken to be on the nature of the risks or potential impacts, rather than their actual management, (higher order concept), which is covered in the last two dot points of the depth study.

Risks, or impacts, to be managed, in relation to the dot points highlighted in the question, may include:

* physical health impacts such as: short term physical injury/illness, reoccurring injury/illness, permanent disability and death
* nature of impacts on physical health including symptoms
* mental health impacts from personal illness, loss of loved ones and community members – fear, ignorance, despair, anxiety
* costs of treatment and medicines both to individuals, governments and NGO’s
* costs of containment of the spread of the disease particularly if spread by a biological agent or human to human
* costs of containment of contaminant if a chemical agent of due to industrial accident
* costs of controlling secondary impacts such as contamination of water supplies and/or food sources
* loss of property
* impact on agricultural production and income
* loss of employment, jobs, and income and wider associated impacts on the economy.

There may be other specific impacts associated with specific ecological hazards.

**Refer over page for marking key.**

**24.**

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Clearly identifies an ecological hazard and describes the concept of risk as related to this hazard. A detailed and comprehensive description is given and accurate information is provided on the types of risks impacting physical and mental health and affecting the economy, associated with the given ecological hazard. A wide range of appropriate supporting evidence and examples are used to develop and strengthen the description. The accurate use of relevant geographical terminology and concepts helps to develop a cohesive, concise and articulate answer, with well-developed sentences and paragraphs in an extended answer format. | 7-8 |
| Identifies an ecological hazard and describes the concept of risk as related to this hazard. An appropriate description is given and more general, but accurate information is provided on the types of risks impacting physical and mental health and affecting the economy, associated with the given ecological hazard. A range of appropriate supporting evidence and examples are used to develop and strengthen the description. Relevant geographical terminology and concepts helps to develop a cohesive and detailed answer, with well-developed sentences and paragraphs in an extended answer format. | 5-6 |
| Identifies an ecological hazard. Describe the concept of risk in part. A limited description is given and some generalised information is provided on the types of risks associated with the given ecological hazard. Limited evidence is used to support statements and generalisations. There is limited use of geographical terminology and concepts in a largely unstructured response. | 3-4 |
| May talk about ecological hazards in general terms. A very basic description is given and little information is provided on the types of risks associated with a given ecological hazard. There is limited or no use of geographical terminology and concepts, and poor literacy skills may contribute to a response that is difficult to understand. | 1-2 |
| No relevant attempt. | 0 |
| **TOTAL** | **8** |

NOTE: If only one (1) of the dot points is addressed a maximum of four marks is to be awarded.

**25.**

**Question 33 (20 marks)**

1. Evaluate why the environmental, economic and social impacts of an ecological hazard you have studied will be different in a developed country such as Australia compared with those in at least one less developed country or region.

(12 marks)

**Syllabus:**

The environmental, economic and social impacts of the hazard in a developed country such as Australia compared with those in at least one less developed country or region.

**Key word:**

Evaluate: to ascertain the value or amount of; **appraise carefully**.

Developed Country: is a country that is considered to be strong in terms of its economy, infrastructure and economic base. The population of a developed country typically has a high standard of living as measured by GDP per capita, high personal income levels, high levels of employment and a number of positive social indices, particularly those related to education and health.

Less Developed Country: is a country that is considered to be lacking in terms of its economy, infrastructure and industrial base. The population of a less developed country has a relatively low standard of living as measured by low income levels, high unemployment, abundant poverty and a number of negative social indices, particularly those related to education an health.

**Teacher Notes:**

Due to the scope of depth studies that can be used in this unit the teacher will have to use their discretion when deciding if the student’s answer supports the question.

**Environmental impacts** of an ecological hazard may refer to the following where relevant:

* destruction of ecosystems, habitats and biodiversity, (natural environment)
* water contamination/shortages, various forms of soil degradation, deforestation, further and additional disease spread as a secondary impact (natural environment)
* destruction of home and buildings due to contamination (built/cultural environment)
* destruction of food crops, livestock due to infection or contamination, and building associated with agriculture, (built/cultural environment)
* others as appropriate.

The impact, size and recovery from these potential environmental impacts will vary between developed countries and less developed countries.

**Reasons** can be related to: political systems and structures, the economic base of the economy, the social structure of the society and the overall level of vulnerability of the country/region. The nature and density of settlements. The nature of agriculture and industry. The levels of technological innovation evident. The existing infrastructure base and the subsequent level of preparedness. National monetary reserves available to contribute towards response and recovery. Although aid is made available, lack of coordination and corruption may render it ineffective.

**26.**

**Economic impacts** of an ecological hazard may refer to the following, where relevant:

* destruction of income earning food crops for domestic and international markets.
* the cost or repair and replacement of the above.
* loss of income due to inability to work.
* costs of medicines and medical facilities.
* cost of immediate relief efforts and ongoing medical responses.
* interruption to jobs, income and spending, domestically and internationally, leading to destabilisation of economy and government.
* potential closure of borders (medical quarantine) and international transport (quarantine).
* evacuation of foreign nationals and workers, leading to loss of workforce and expertise.
* decline in tourism.
* loss of confidence and international investment.

The impact, size and recovery from these potential economic impacts will vary between developed countries and less developed countries.

**Reasons** can be related to: political systems and structures, the economic base of the economy, the social structure of the society and the overall level of vulnerability of the country/region. The nature and density of settlements. The nature of agriculture and industry. The levels of technological innovation evident. The existing infrastructure base and the subsequent level of preparedness. National monetary reserves available to contribute towards response and recovery. Political instability can lead to breakdown of law, inhibits countries recovery, in domestic trade and external investment.

**Social Impacts** of an ecological hazard may refer to the following, where relevant:

* High percentage of deaths, injury and/or infection from ecological disasters occurs in LDC’s, particularly Sub Saharan Africa.
* Loss of employment, income and businesses.
* Health, long and short term consequences.
* Health care infrastructure already limited, cannot cope with hazard event.
* High costs of medicines and medical facilities impact on other areas of personal expenditure, reducing standard of living.
* Impacts last for longer and may reoccur.
* Lack of access to education can prevent children from receiving adequate training and care.

The impact, size and recovery from these potential social impacts will vary between developed countries and less developed countries.

**Reasons** can be related to: Close links between poverty and vulnerability to ecological hazards. Frequency of disasters can hinder government’s efforts to reduce poverty. Political systems and structures, the economic base of the economy, the social structure of the society and the overall level of vulnerability of the country/region. The existing infrastructure base and the subsequent level of preparedness. National monetary reserves available to contribute towards response and recovery. Although aid is made available, lack of coordination and corruption may render it ineffective.

**Refer over page for marking key.**

**27.**

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| A clear and concise identification of a developed country and a less developed country or region is made. In relation to a clearly identified type of ecological hazard, a detailed and comprehensive evaluation is given of the various reasons for the differences in the level of environmental, economic and social impacts between the areas identified. (A thorough response will necessarily describe various potential environmental, economic and social impacts for the particular locations and type of ecological hazard being discussed.) A wide range of appropriate supporting evidence and examples are used to develop and strengthen the evaluation and demonstrate varying levels of environmental, economic and social impact. The accurate use of relevant geographical terminology and concepts helps to develop a cohesive, concise and articulate answer, with well-developed sentences and paragraphs in an extended answer format. | 11-12 |
| A concise identification of a developed country and a less developed country or region is made. In relation to a clearly identified type of ecological hazard, a detailed evaluation is given of the various reasons for the differences in the level of environmental, economic and social impacts between the areas identified. (A thorough response will necessarily describe various potential environmental, economic and social impacts for the particular locations and type of ecological hazard being discussed.) A range of appropriate supporting evidence and examples are used to develop and strengthen the evaluation and demonstrate varying levels of environmental, economic and social impact. Relevant geographical terminology and concepts help to develop a cohesive and detailed answer, with well-developed sentences and paragraphs in an extended answer format. | 9-10 |
| Identification of a developed country and a less developed country or region is made. In relation to a clearly identified type of ecological hazard, an evaluation is given of the various reasons for the differences in the level of environmental, economic and social impacts between the areas identified. (A good response will describe a number of potential environmental, economic and social impacts for the particular locations and type of ecological hazard being discussed.) A range of appropriate supporting evidence and examples are used to develop and strengthen the evaluation and demonstrate varying levels of environmental economic and social impacts. Relevant geographical terminology and concepts help to develop a cohesive answer, with sentences and paragraphs in an extended answer format. | 6-8 |
| Might identify a developed country and a less developed country or region, or may vaguely refer to the concepts. In relation to an ecological hazard, a limited evaluation, probably only a description, is given of the reasons for the differences in the level of environmental, economic or social impacts between the areas identified. (Response will describe one or two potential environmental, economic and/or social impacts for the particular locations and ecological hazard being discussed **or** will describe the impacts in some detail but fail to appraise the reasons for the variations at all.) Limited evidence is used to support statements and generalisations with little reference to varying levels of impacts. There is limited use of geographical terminology and concepts in a largely unstructured response. | 3-5 |
| Might identify a developed country and a less developed country or region, or may vaguely refer to the concepts, if at all. In relation to an ecological hazard, a very limited, or no, account is given of the reasons for the differences in the level of some impacts. (Response may describe one or two potential impacts for the ecological hazard being discussed **or** will very briefly describe the impacts but fail to appraise the reasons for the variations at all.) Insufficient evidence is used to support statements and generalisations with no reference to varying levels of impact. There is limited or no use of geographical terminology and concepts and poor literacy skills may contribute to a response that is difficult to understand. | 1-2 |
| No relevant attempt. | 0 |
| **TOTAL** | **12** |

NOTE: If only one or two of the three types of listed impacts are addressed a maximum of 4 or 8 marks can be awarded.

**28.**

**Question 34 (20 marks)**

1. Describe the nature of an ecological hazard you have studied by referring to it’s:

* duration and frequency, and
* the scale of its spatial impact

(8 marks)

**Syllabus:**

The magnitude, duration, frequency, probability and scale of spatial impact of the hazard

**Key word:**

Describe: provide characteristics and features.

Duration: the length of time a hazard event occurs.

Frequency: the rate at which or number of times a hazard occurs over a particular period of time.

Scale of spatial impact: the extent or size of the area or region impacted by the hazard

**Teacher Notes:**

Due to the scope of depth studies that can be used in this unit the teacher will have to use their discretion when deciding if the student’s answer supports the question.

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| A detailed and comprehensive description is given and accurate information is provided on the duration, frequency and scale of spatial impact of an ecological hazard. A wide range of appropriate supporting evidence and examples are used to develop and strengthen the description. The accurate use of relevant geographical terminology and concepts helps to develop a cohesive, concise and articulate answer, with well-developed sentences and paragraphs in an extended answer format. | 7-8 |
| An appropriate description is given and general, relatively accurate information is provided on the duration, frequency and scale of spatial impact of an ecological hazard. A range of appropriate supporting evidence and examples are used to develop and strengthen the description. Relevant geographical terminology and concepts helps to develop a cohesive and detailed answer, with well-developed sentences and paragraphs in an extended answer format. | 5-6 |
| A limited description is given and some generalised information is provided for at least the duration and frequency or the scale of spatial impact of an ecological hazard. Limited evidence is used to support statements and generalisations. There is limited use of geographical terminology and concepts in a largely unstructured response. | 3-4 |
| A very basic description is given and little information is provided for the factors listed in relation to an ecological hazard. Alternatively, very brief descriptions (1 sentence each could be given for all the factors). Insufficient evidence is presented in the description. There is limited or no use of geographical terminology and concepts, and poor literacy skills may contribute to a response that is difficult to understand. | 1-2 |
| No relevant attempt. | 0 |
| **TOTAL** | **8** |

NOTE: If only one (1) of the dot points is addressed a maximum of four marks is to be awarded.

**Question 34 (20 marks)**

(b) Identify **two (2)** stakeholder groups affected by an ecological hazard you have studied and evaluate their values and viewpoints on recovery and adaptation measures undertaken.

(12 marks)

**29.**

**Syllabus:**

The stakeholders affected by the hazard and their values and viewpoints on recovery and adaptation to future hazards in terms of modifying:

* human vulnerability (susceptibility to future loss)
* loss burden (cost of loss mitigation and adaptation)

**Key word:**

Identify: recognise and name.

Evaluate: to ascertain the value or amount of; appraise carefully.

Stakeholders: a group or organisation that has interest or concern in an event, process or activity.

Values: a judgement of what is important to an individual or group in a given situation. Important beliefs or ideals shared by a group about what are good, bad or desirable outcomes.

Viewpoints: a way of looking at or thinking about something.

Recovery: the longer term measures taken to rebuild a community after a hazard event or disaster has occurred.

Adaptation: alteration or adjustment in response to a changed environment.

**Teacher Notes:**

Due to the scope of depth studies that can be used in this unit the teacher will have to use their discretion when deciding if the student’s answer supports the question.

**Stakeholders:** Students will need to identify and name **two (2)** different stakeholder groups, along with a brief description of who they are, what they do and the nature of their stake in the scenario. An extremely strong case would have to be presented by the candidate to accept an individual as a stakeholder. Terms such as ‘the residents’ and ‘the citizens’ are also generally accepted as too general, as opinions can vary throughout such broad groups.

Whilst it would be preferable (and a better structured answer) to present two differing sets of values and viewpoints, the syllabus dot point and question does not explicitly require this.

Examples of stakeholders could include:

* local aid workers
* international aid workers and agencies
* environmental groups and agencies
* village council
* local governments and councils
* regional, state and federal governments and departments
* United Nations agencies
* Doctors Without Borders (Medecins Sans Frontieres)
* Occupational related groups, e.g. local farmers, mine owners, utility suppliers
* Others as relevant to the specific natural hazard studies

**30.**

**Values and Viewpoints:** In evaluating values and viewpoints candidates should state the stakeholder groups’ role in, or connection to the affected area. Are they local to the area? Are they involved or connected on a permanent or temporary basis? Is their presence permanent or transitory?

Discussion should include their value and viewpoints on a number of recovery measures and adaptation strategies that could be or are being applied in response to the natural hazard being examined. A clear understanding of the meanings of recovery and adaptation in response to the natural hazard should be demonstrated. More than one recovery and one adaptation measure should be referred to.

An evaluation should include an assessment on the value or usefulness of their viewpoint.

Another way of looking at stakeholders values and viewpoints is to outline whether the stakeholders’ values and viewpoints in regard to recovery and adaptation can be classified as *proactive*, *reactive* or *fatalistic*. Whether candidates refer to these terms will be a reflection on the approach taken in the classroom.

**Marking Key:**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Identification of a specific ecological hazard and of **two (2)** different stakeholder groups is made. Thorough descriptions of the nature of their role and stake are provided. A detailed and comprehensive evaluation of the values and viewpoints of each stakeholder group in relation to a number of recovery measures and adaptations undertaken for the ecological hazard is presented. A wide range of appropriate supporting evidence and specific examples are used to develop and strengthen the evaluation. The accurate use of relevant geographical terminology and concepts helps to develop a cohesive, concise and articulate answer, with well-developed sentences and paragraphs in an extended answer format. | 11-12 |
| Identification of a specific ecological hazard and of **two (2)** different stakeholder groups is made. Accurate descriptions of the nature of their role and stake are provided. A detailed evaluation of the values and viewpoints of each stakeholder group in relation to a number of recovery measures and adaptations undertaken for the ecological hazard is presented. A range of supporting evidence and specific examples are used to develop and expand the evaluation. Relevant geographical terminology and concepts help to develop a cohesive and detailed answer, with well-developed sentences and paragraphs in an extended answer format. | 9-10 |
| Identification of a specific ecological hazard and of **two (2)** different stakeholder groups is made. General descriptions of their role and stake are provided. An appropriate evaluation of the values and viewpoints of the stakeholders in relation to recovery from and adaption undertaken for the ecological hazard is presented. Some supporting evidence is used to develop the evaluation. Geographical terminology and concepts are applied to construct a response, which shows some detail, but may have difficulty articulating ideas. | 6-8 |
| Identifies a specific ecological hazard, however, possibly identifies only **one (1)** of **two (2)** different stakeholder groups. Limited or non-existent descriptions of their role and stake are given. Limited evaluation, probably only a description, of their values and viewpoints in relation to recovery and adaption undertaken for the ecological hazard is presented. Limited evidence is used to support statements and generalisations. There is limited use of geographical terminology and concepts in a largely unstructured response. | 3-5 |
| Possibly identifies an ecological hazard, however, identifies only **one (1)**, if any, stakeholder groups. Descriptions of their role and stake not given. Possibly a short description of their values and viewpoints. Insufficient evidence is used to support statements and generalisations. There is limited use of geographical terminology and concepts, and poor literacy skills may contribute to a response that is difficult to understand. | 1-2 |
| No relevant attempt. | 0 |
| **TOTAL** | **12** |

**End of Section Three**

**End of Answers**