



DEPARTMENT OF
EDUCATION

UPPER SECONDARY
SCHOOL CERTIFICATE
EXAMINATIONS

GEOGRAPHY

Thursday

17 October 2013

Time allowed:

2 hours 30 minutes

(8:00 am – 10:30 am)

NO EXTRA TIME

(NO OTHER TIME)

Candidates are advised to
fully utilise the allocated time



INSTRUCTIONS TO CANDIDATES:

(To be read out by the external invigilator)

1. The subject code for **Geography** is **13**
2. There are **19 printed** pages in the question booklet.
3. An Electronic Answer Sheet for Part A and **8 printed** pages in the answer booklet for Part B are inserted in the centre of the question booklet.

You will be given an extract of the Papua New Guinea **Topographic survey map WEWAK 1:100 000** for use in this examination.

4. There are **two** parts in this paper. Answer all questions.

Part A: Multiple Choice (Questions 1- 30) 30 Marks

This part will be electronically marked.

All answers to the Multiple Choice Part ***MUST*** be answered on the Electronic Answer Sheet.

Carefully following the instructions, fill in your Candidate Information and Subject Information.

Choose A, B, C, or D from the alternatives given and use a HB pencil to shade in the correct letter to each question on the Electronic Answer Sheet.

If you make a mistake, rub the shading out completely with an eraser and shade in your correct alternative clearly.

Part B: Short Answers (Questions 31- 40) 70 Marks

Write down your name, your school and complete your 10 digit candidate number on the Answer Booklet provided for Section B.

5. You are required to write only the correct answers in the space provided on the Answer Booklet.
6. Answers written on the question paper including the rough work paper will **not** be marked. Write answers neatly in spaces allocated on the answer sheet. Answer **ALL** questions.
7. Correction Fluid is ***not allowed*** on the answer sheet. Where you have made an error, cross out the wrong answer and start on a new line.

The Penalty for Cheating or Assisting Others to Cheat in National Examinations is Non-Certification.

DO NOT TURN OVER THE PAGE

AND DO NOT WRITE UNTIL YOU ARE TOLD TO START.

QUESTION 7

If you are travelling from Wewak to Rambumba, what are some of the likely vegetation that you would find?

- A. medium forest, rainforest, swampland, savannah and grassland.
- B. medium forest, secondary growth, plantation and rainforest.
- C. secondary growth, grassland, swampland, plantation and savannah.
- D. grassland, mangrove, medium forest, swampland and rainforest.

QUESTION 8

If a plane flies from Wewak Airport to Mambe Landing Ground, in what direction would it travel?

- A. Southeast
- B. Southwest
- C. Northeast
- D. Northwest

QUESTION 9

Which direction is Yarapos Mission from Pampania (8196)?

- A. Southeast
- B. Northeast
- C. Southwest
- D. Northwest

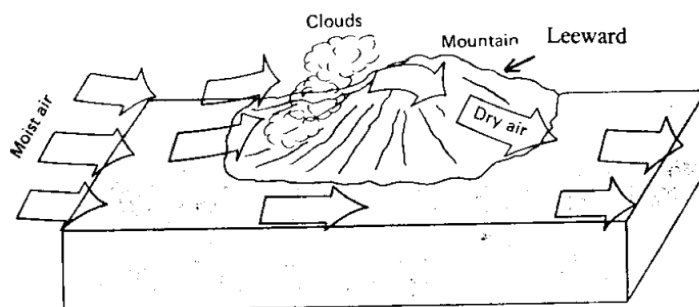
QUESTION 10

Which 6-figure grid square reference is Wambe located?

- A. 785815
- B. 826788
- C. 817788
- D. 816798

QUESTION 11

Study the diagram below and answer the question.



What type of rainfall commonly occurs on a physical landscape such as this?

- A. Frontal
- B. Cyclonic or Relief
- C. Convective
- D. Orographic or Relief

QUESTION 12

Which of these is not caused by urbanisation?

- A. cyclones
B. deforestation
C. destruction of animal habitat
D. air pollution

QUESTION 13

Which of these countries has a climate similar to Papua New Guinea?

- A. Japan B. Brazil C. Canada D. Republic of South Africa

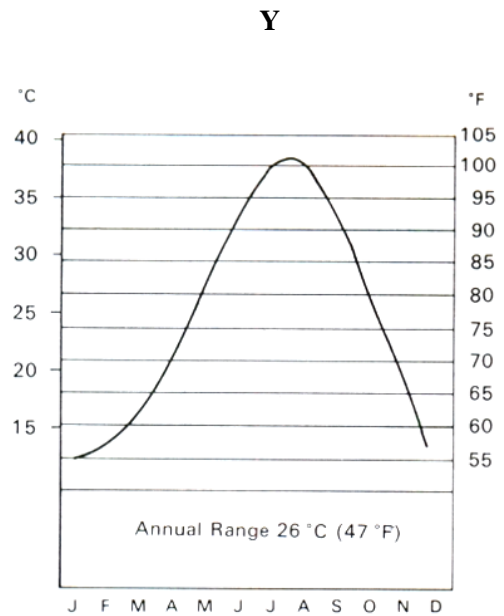
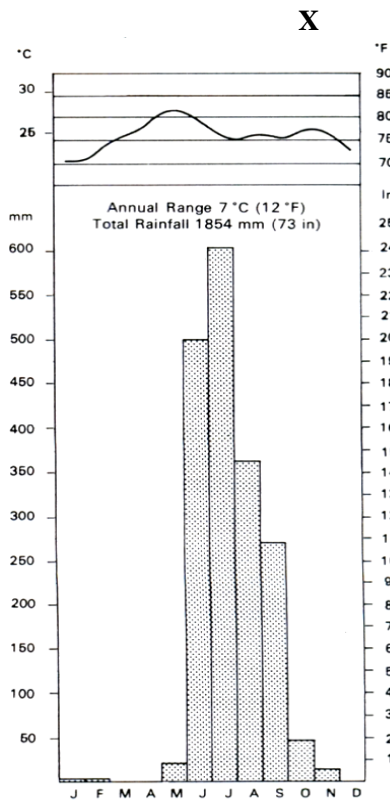
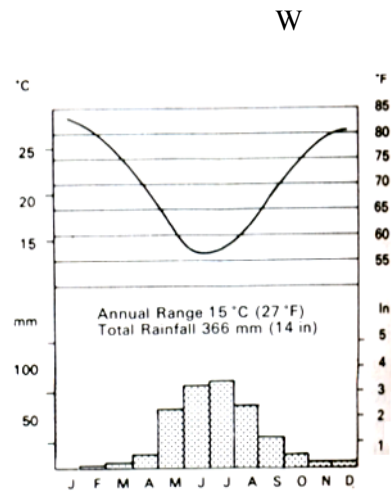
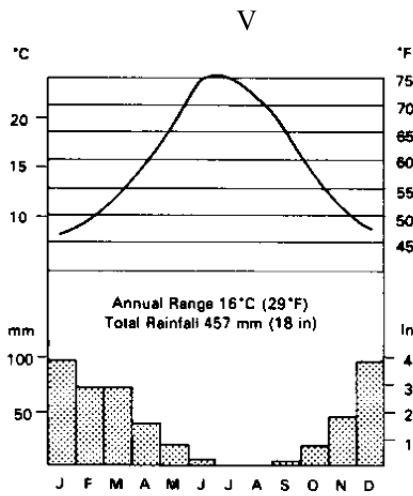
QUESTION 14

What type of vegetation is shown in the photograph below?



- A. Tropical Monsoon
B. Temperate evergreen forest
C. Mediterranean forest
D. Temperate Desert vegetation

For questions 15 to 17, study the climate graphs below.



QUESTION 15

Which of these statements is correct?

- A. Place V is in the northern hemisphere.
- B. Place W is in the northern hemisphere.
- C. Place X is situated along the equator.
- D. Place Y is in the southern hemisphere.

QUESTION 16

Which of these statements is correct?

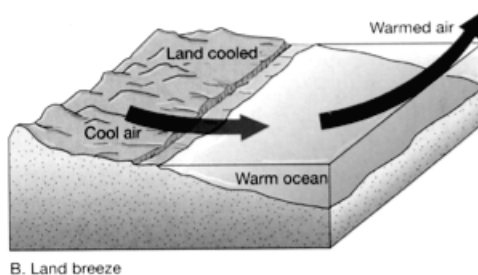
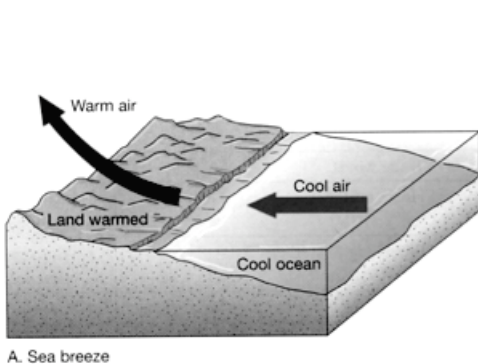
- A. Place V is a tropical desert.
- B. Place W is a cold desert.
- C. Place X is a tropical wet and dry or monsoon region.
- D. Place Y is an equatorial wet place.

QUESTION 17

Which of these statements is correct?

- A. Place V supports a tropical rainforest.
- B. Place W supports a tropical rainforest.
- C. Place X supports a tropical rainforest.
- D. Place Y supports a tropical desert vegetation.

For questions 18 and 19, study the diagram below.



QUESTION 18

Which of these is not true about diagram A on sea breeze?

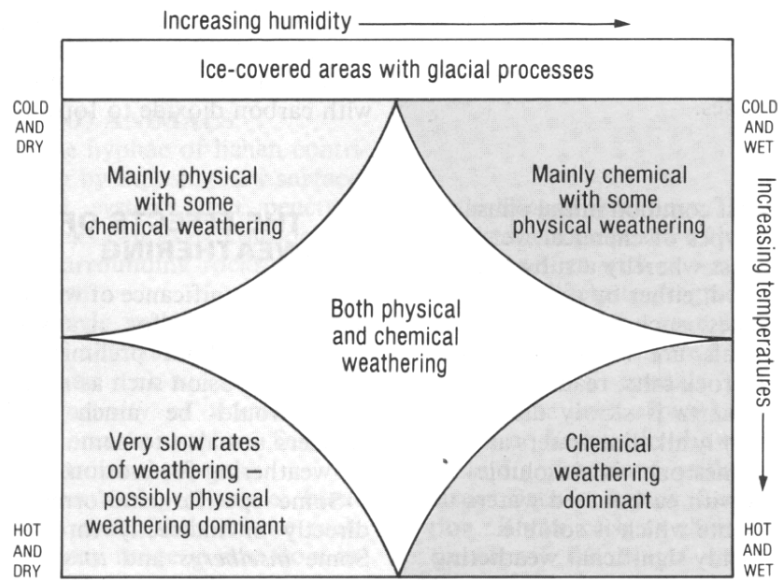
- A. The land is warmer than the sea.
- B. The pressure on the land is lower than at sea.
- C. Warm air rises because it is pushed by cool air from the sea.
- D. Cool air rushes onto the land to replace the warm rising air.

QUESTION 19

Which of these statements is correct?

- A. Breeze is the movement of air from an area of high pressure to an area of low pressure.
- B. Breeze is the movement of air from an area of low pressure to an area of high pressure.
- C. During the night air moves from the land to the sea because the sea has a high pressure.
- D. The breeze that blows in the night is called a land breeze because winds are named after the direction to which they blow.

For questions 20 and 21, study the figure below on ‘The Influence of Climate on Weathering’.



The Influence of Climate on Weathering

QUESTION 20

Which of these is the main type of weathering in Papua New Guinea?

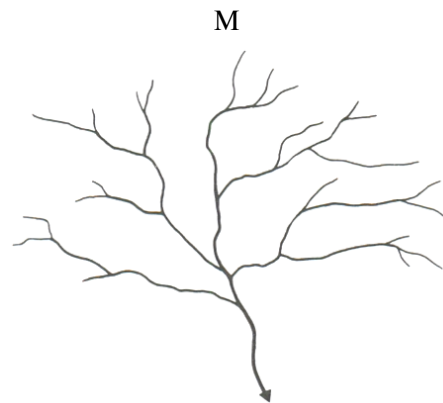
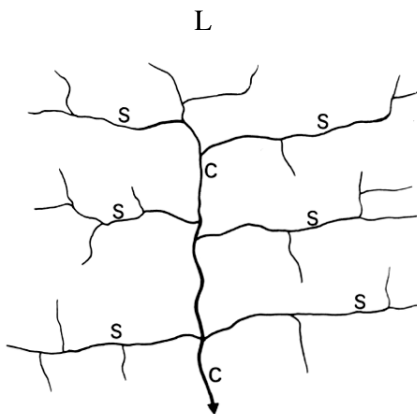
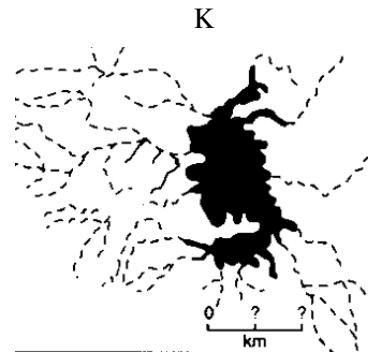
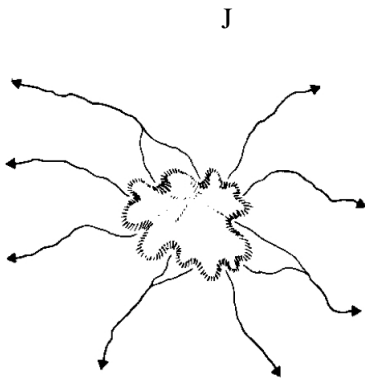
- A. Mainly chemical with some physical weathering.
- B. Chemical weathering dominant.
- C. Very slow rates of weathering – possibly physical weathering dominant.
- D. Mainly physical with some chemical weathering.

QUESTION 21

Which of these is the main type of weathering in a temperate desert?

- A. Mainly chemical with some physical weathering.
- B. Chemical weathering dominant.
- C. Very slow rates of weathering – possibly physical weathering dominant.
- D. Mainly physical with some chemical weathering.

For questions 22 and 23, study the drainage patterns below.



QUESTION 22

What type of a drainage pattern is M?

- A. Dendritic B. Radial C. Trellis D. Centripetal

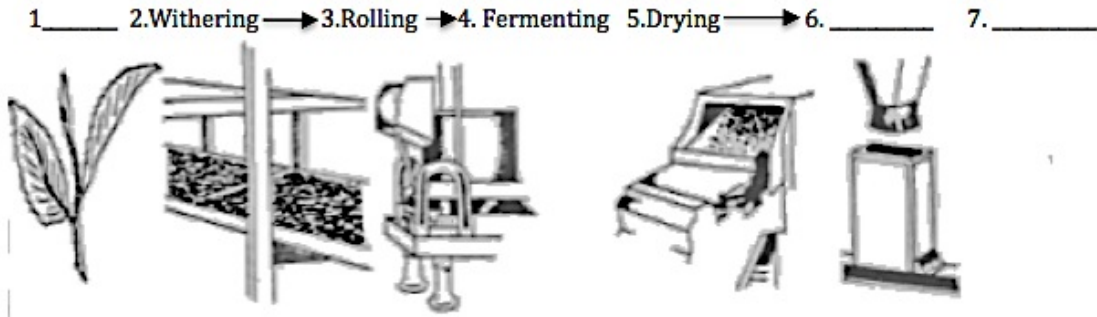
QUESTION 23

Which drainage pattern develops on a dome or volcanic cone and the streams flow away from the source in all direction?

- A. J B. K C. L D. M

QUESTION 24

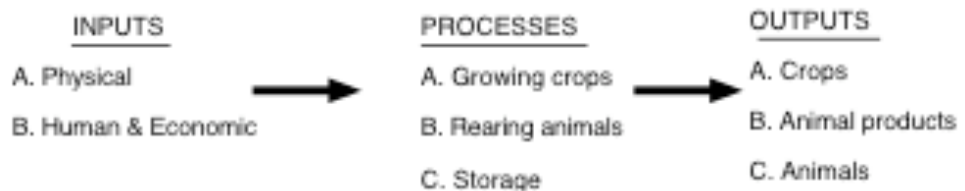
Below is a figure showing the production of tea.
Processes 1, 6 and 7 are missing.



The list below contains the processes 1, 6 and 7. Which list correctly completes the production of tea?

- A. Marketing, Picking, Packing
- B. Picking, Packing, Marketing
- C. Packing, Picking, Marketing
- D. Packing, Marketing, Picking

For questions 25 and 26, study the diagram below.



QUESTION 25

Which list of inputs below contains physical factors only.

- A. Climate, relief, transport cost, soil
- B. Seeds and livestock, labour, rainfall, machinery
- C. Energy (electricity), growing season, temperature, rent
- D. Soil and drainage, relief, rainfall, temperature

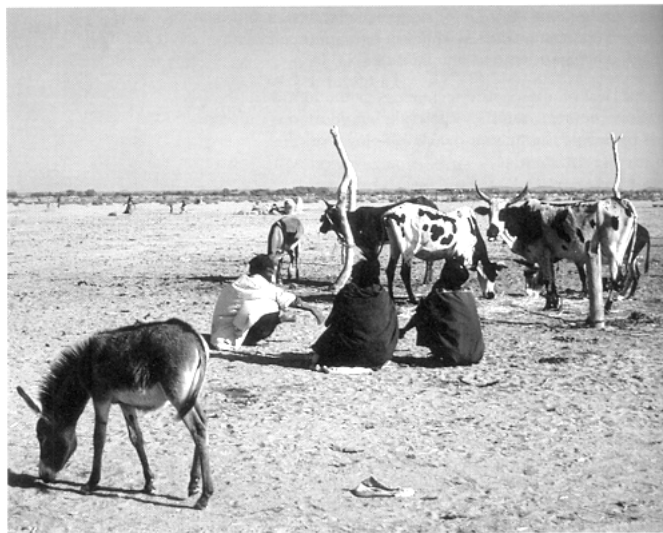
QUESTION 29

Which of these is not a factor that influences the location of a modern industry.

- A. labour B. raw materials C. climate D. access to market

QUESTION 30

Study the photograph below and answer the question.



What is the main cause of 'desertification' according to the photograph?

- A. overgrazing B. over-cultivation C. deforestation D. climate change

PART B: SHORT ANSWER (QUESTIONS 31 to 40) 70 MARKS

For questions 31 to 33, use the same topographic map: WEWAK 1:100 000 to answer the questions.

QUESTION 31

(a) Write down the 4- figure grid square references for

- i) Brandi _____ (1)
- ii) Terebu Landing Ground _____ (1)
- iii) Rabiawa _____ (1)
- iv) Yamben _____ (1)

(b) Write down the 6 - figure grid square references for

- i) Hereng _____ (1)
- ii) Rogushogu _____ (1)
- iii) Wanabrugu (Warigum) _____ (1)

QUESTION 32

Below are seven grid square references from the map, labelled A, B, C, D, E, F and G; and seven types of social, cultural and economic land uses that can be found on the map.

Grid references:

A	B	C	D	E	F	G
9603	0489	9004	9905	9504	8805	0186

Identify the grid square from this list in which the following land use types can be found, and write the letter, A, B, C, D, E, F or G, next to the name of the land use.

- (i) War Cemetery _____ (1)
- (ii) Mambe Mission _____ (1)
- (iii) Boram Hospital _____ (1)
- (iv) Wewak Airport _____ (1)
- (v) Wawat Government Medical Station _____ (1)
- (vi) Plantation _____ (1)
- (vii) Training College _____ (1)

QUESTION 33

- (i) What is the distance to the nearest kilometres, from the highest point on Alexander Range (127895) to the coast at Suanam (160919)? (1 mark)
- (ii) What are the altitudes of these two locations?
- a) Wandomi _____ b) Rindagum _____ (2 marks)
- (iii) What is the change in altitude, to the nearest 100 m, from the highest point of Prince Alexander Range (127895) to Suanam village? (1 mark)
- (iv) Using your answers from (i) and (iii), calculate the approximate average gradient from the highest point of Alexander Range to Suanam village. (*Show your working out*) (3 marks)

QUESTION 34

Climate has a significant influence on the distribution of plants and animals. This is because each plant and animal has an optimum range. Terrestrial plants also have an optimum moisture range. Within these temperature and moisture range, plants and animals can reproduce to sustain their population. As such, different economic activities take place around the world. These include cash crops, livestock, logging and fisheries.

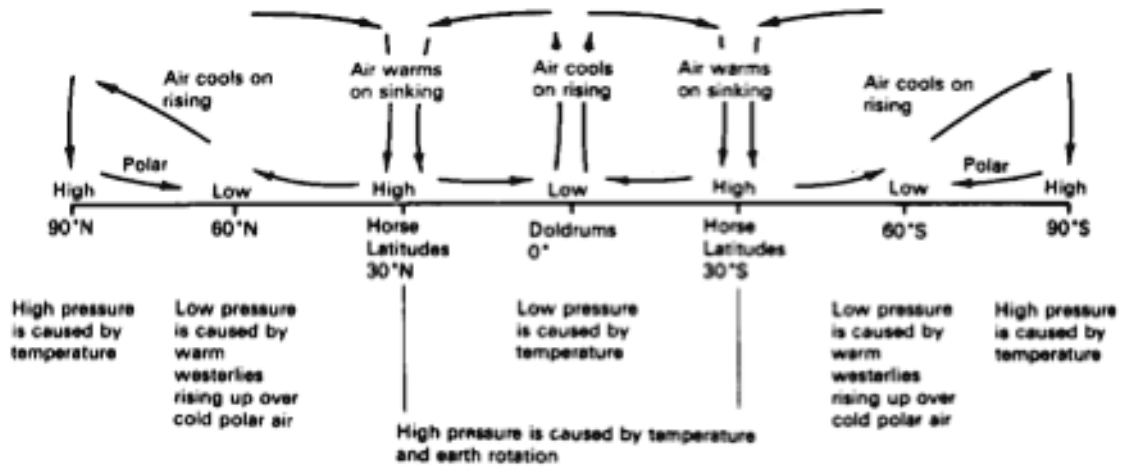
Below is a list of agricultural crops, livestock, logging and fisheries. For each activity, write the climate or the vegetation type in which you would find this activity.

1. Sugarcane plantation
2. Wheat farming
3. Sheep grazing
4. Softwood logging
5. Whale fishing
6. Tuna fishing
7. Grape farming

QUESTION 35

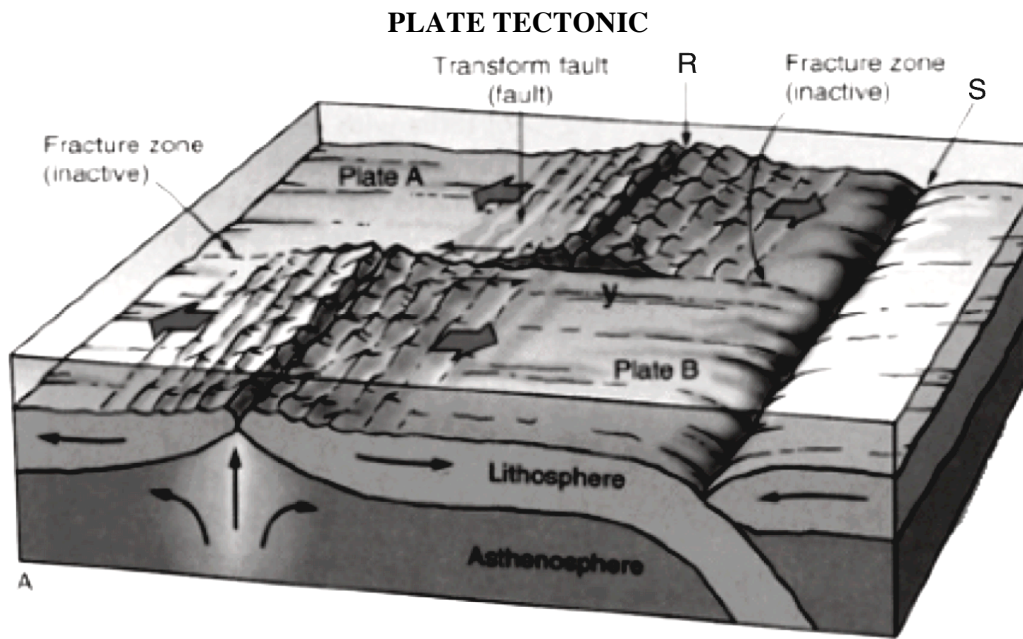
Refer to the illustration to answer questions (i) and (ii).

AIR PRESSURE SYSTEM



- i) Define: wind (1 mk)
- ii) Name the six world winds according to the specific latitudes in which they blow. (6 mks)
 - a) 90°N to 60°N
 - b) 30°N to 60°N
 - c) 30°N to 0°
 - d) 30°S to 0°
 - e) 30°S to 60°S
 - f) 90°S to 60°S

QUESTION 36



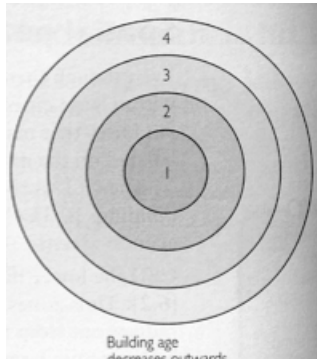
Study the diagram on plate tectonics and answer the questions.

- a) Is plate B a continental plate or an oceanic plate? (1 mk)
- b) Name the landform created at 'R'. (1 mk)
- c) Describe what is happening to plate A to create landform 'R'. (1 mk)
- d) Name the landform created at 'S'. (1 mk)
- e) Describe the type of plate movement that is responsible for creating landform 'S'. (1 mk)
- f) Describe the type of plate movement that is responsible for creating the transform fault between parts of Plate A and Plate B. (1 mk)
- g) What is another name for the asthenosphere? (1 mk)

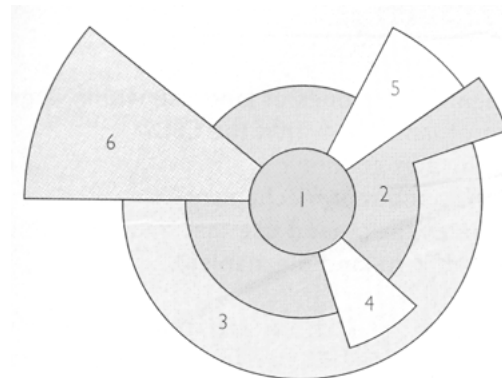
QUESTION 37

Below are four models of urban land use.

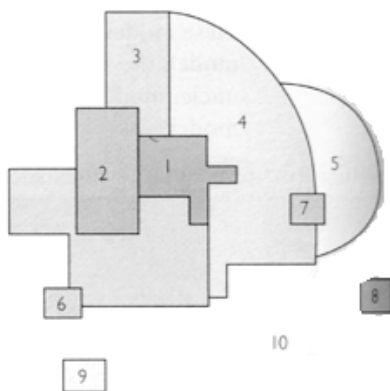
Model.1



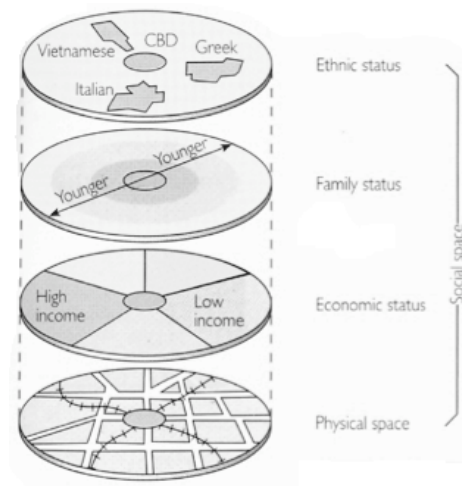
Model.2



Model.3



Model.4



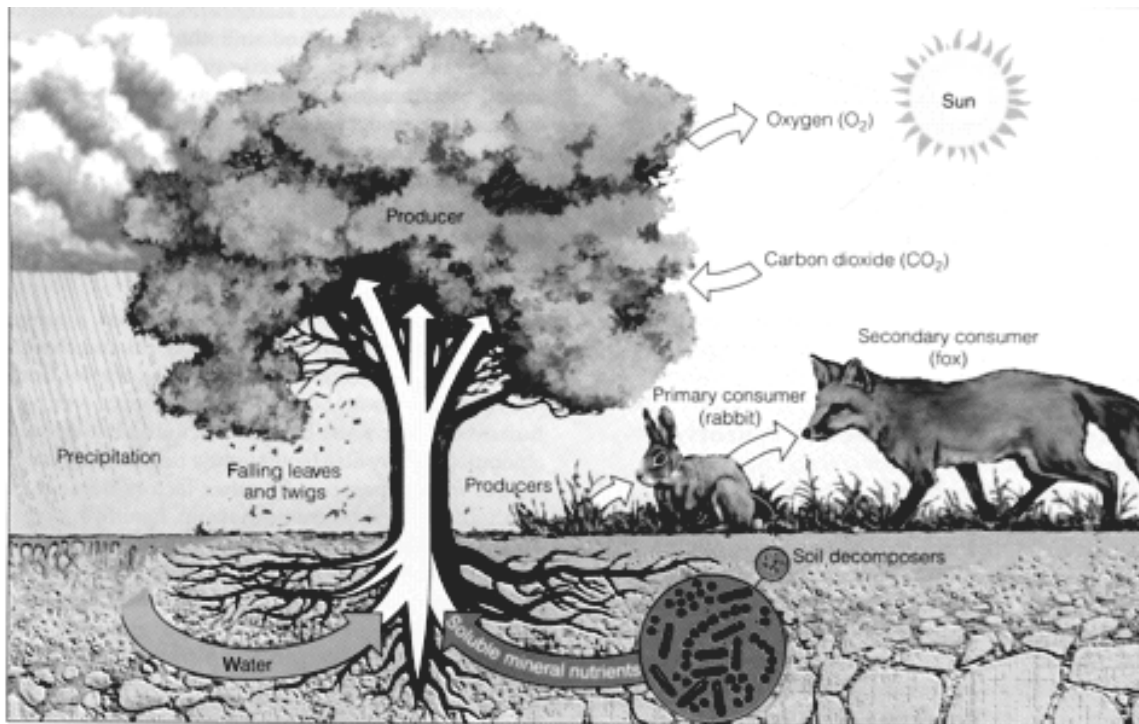
1. **CONCENTRIC MODEL:** A central core (CBD) exists in the middle and the city develops outwards from it.
2. **MULTIPLE NUCLEI MODEL:** A complex urban development model where various sectors are scattered and smaller CBDs developing around it.
3. **SECTOR MODEL:** A radial growth of a city along major road and transport routes outward from a CBD.
4. **MODEL OF URBAN ECOLOGICAL STRUCTURE:** City development and housing are developed by sectors with other factors like ethnicity, family status, economic status..etc.

- i) Explain how land rent is affected as distance from the CBD increases as shown in model 1?
- ii) In a concentric zone model, what happens to the age of buildings as you move away from the CBD? (1 mk)
- iii) Name the main factor responsible for creating zone '10' in a city's physical space. (1 mk)

- iv) Study Model 4 of a city. Describe how the city's physical space is eventually shaped by each of the social factors below. (3 mks)
- Ethnic status:
 - Family status/age (old family vs young family):
 - Economic status:
- v) Explain why CBDs usually have high-rise buildings. (1 mk)

QUESTION 38

Below is an example of an ecosystem. In an ecosystem, plants, animals and decomposers are closely linked through specific physical processes.

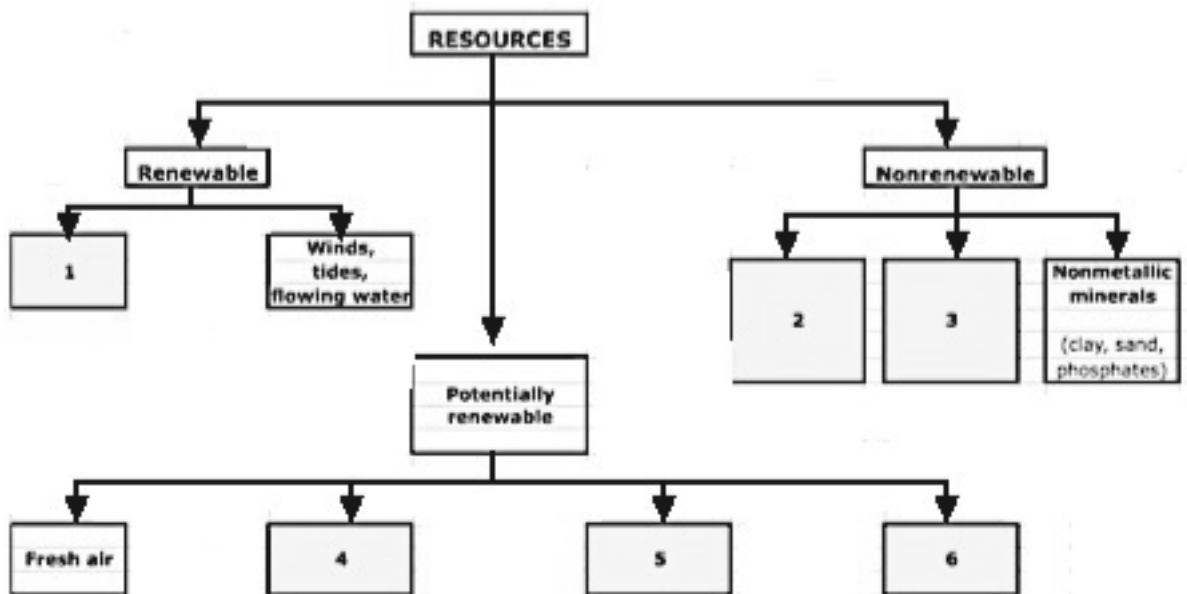


- Name the single most important type of energy necessary for any physical/natural process on the earth. (1 mk)
- From the illustration above, list the two main outputs by producers. (2 mks)
- Explain the importance of falling leaves and twigs to an ecosystem. (1 mk)
- Explain the role of water in the ecosystem shown above? (1 mk)
- Explain the role of soil decomposers. (1 mk)
- Name the combined process by which water is released into the atmosphere by plants, animals, decomposers and the soil. (1 mk)

QUESTION 39

Resources can be divided into two main groups. However, due to human activities, some renewable resources are becoming ‘potentially renewable’ resources. That is, their ability to renew themselves is being threatened by humans. As such, they can become non-renewable resources. Some resources are perpetually renewable resources. That is, as long as the earth exists, these resources will always be around. They are simply called renewable resources. Others take millions of years to form and therefore are non-renewable during a being’s life span.

- a) From the list of resources given below. Place each resource next to a number below to indicate what type of resources they are. (6 mks)



Resources: Fertile soil, Fossil fuel, Direct solar energy, plants and animals (biodiversity), metallic minerals (iron, copper, aluminium)

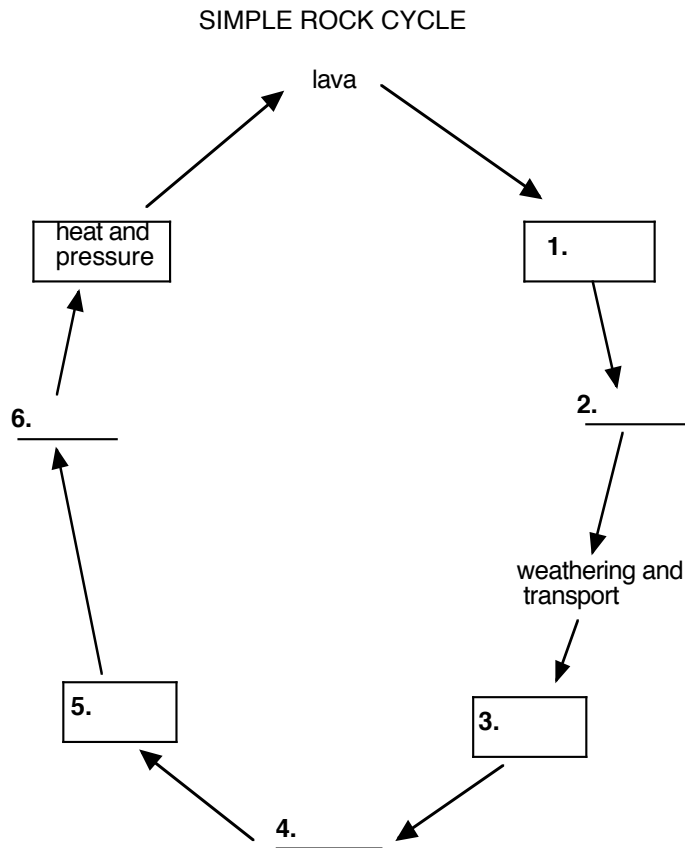
- b) Name the environmental issue caused by humans that makes fresh air a ‘potentially renewable’ resource. (1 mk)

QUESTION 40

- a) Below is a simple rock cycle. In order for a rock to become another type of rock, it must undergo a process or processes. A list of words that name the processes and the name of rock types are given below.

Write the correct word that should go in each blank to complete the rock cycle. (6 mks)

Words to use: metamorphic rock, compression, cooling, igneous rock, extreme heat and pressure, sedimentary rock.



- b) Which of the three types of rocks from the diagram is very resistant to weathering? (1 mk)

END OF EXAMINATION

GEOGRAPHY PAPER - 2013

PART B - ANSWER BOOKLET

Write your name, your province and school codes and your candidate number correctly and clearly in the space provided below.

Year		Province		School			Candidate No		
1	3								

Candidate Name: _____

School Name: _____

ANSWERS WRITTEN ON THE QUESTION PAPER OR ANY OTHER PAPER WILL NOT BE MARKED. WRITE ANSWERS NEATLY IN THE SPACES AS PROVIDED IN THIS ANSWER BOOKLET.

FOR MARKERS USE ONLY

	Score	Markers Initials	
		M1	M2
Question 31			
Question 32			
Question 33			
Question 34			
Question 35			
Question 36			
Question 37			
Question 38			
Question 39			
Question 40			
TOTAL			

PART: B SHORT ANSWERS

For questions 31 to 33, use the same topographic map: WEWAK 1:100 000 to answer these questions.

<p>QUESTION 31</p> <p>(a) Write down the 4-figure grid square references for</p> <p>i) Brandi _____</p> <p>ii) Terebu Landing Ground _____</p> <p>iii) Rabiawa _____</p> <p>v) Yamben _____</p> <p>(b) Write down the 6-figure grid square references for</p> <p>i) Hereng _____</p> <p>ii) Rogushogu _____</p> <p>iii) Wanabrugu (Warigum) _____</p>	<p>(1)</p> <p>(1)</p> <p>(1)</p> <p>(1)</p> <p>(1)</p> <p>(1)</p> <p>(1)</p> <p>(1)</p>
<p><i>For Markers Use Only</i></p>	<p>Q31 TOTAL</p>

QUESTION 32		
Write the letter next to the name of the land use.		
i) War Cemetery	_____	(1)
ii) Mambe Mission	_____	(1)
iii) Boram Hospital	_____	(1)
iv) Wewak Airport	_____	(1)
v) Wawat Government Medical Station	_____	(1)
vi) Plantation	_____	(1)
vii) Training College	_____	(1)
<i>For Markers Use Only</i>	Q32 TOTAL	

QUESTION 33		
i) _____		(1)
ii) (a) Wandomi _____		(1)
(b) Rindagum _____		(1)
iii) _____		(1)
iv) average gradient: _____ (1 mark)	(show your working out)	(2 marks) (3)
<i>For Markers Use Only</i>	Q33 TOTAL	

QUESTION 34	
(i) _____	(1)
(ii) _____	(1)
(iii) _____	(1)
(iv) _____	(1)
(v) _____	(1)
(vi) _____	(1)
(vii) _____	(1)
<i>For Markers Use Only</i>	Q34 TOTAL

QUESTION 35	
(i) _____	(1)
(ii)	
(a) _____	(1)
(b) _____	(1)
(c) _____	(1)
(d) _____	(1)
(e) _____	(1)
(f) _____	(1)
<i>For Markers Use Only</i>	Q35 TOTAL

QUESTION 36		
(a)	_____	(1)
(b)	_____	(1)
(c)	_____	(1)
(d)	_____	(1)
(e)	_____	(1)
(f)	_____	(1)
(g)	_____	(1)
<i>For Markers Use Only</i>	Q36 TOTAL	

QUESTION 37		
(i) _____		(1)
(ii) _____		(1)
(iii) _____		(1)
(iv)		
a) _____ _____		(1)
b) _____ _____		(1)
c) _____ _____		(1)
(v) _____		(1)
<i>For Markers Use Only</i>	Q37 TOTAL	

<p>QUESTION 38</p> <p>a) _____</p> <p>b)</p> <p> (i) _____</p> <p> (ii) _____</p> <p>c) _____</p> <p>d) _____</p> <p>e) _____</p> <p>f) _____</p>	<p>(1)</p> <p>(1)</p> <p>(1)</p> <p>(1)</p> <p>(1)</p> <p>(1)</p> <p>(1)</p>
<p><i>For Markers Use Only</i></p>	<p>Q38 TOTAL</p>

QUESTION 39		
a)		
1.	_____	(1)
2.	_____	(1)
3.	_____	(1)
4.	_____	(1)
5.	_____	(1)
6.	_____	(1)
b)	_____	(1)
<i>For Markers Use Only</i>	Q39 TOTAL	

QUESTION 40		
a)		
1.	_____	(1)
2.	_____	(1)
3.	_____	(1)
4.	_____	(1)
5.	_____	(1)
6.	_____	(1)
b)	_____	(1)
<i>For Markers Use Only</i>	Q40 TOTAL	