

MARKER CODE			



Student Personal Identification Number					

TONGA GOVERNMENT
MINISTRY OF EDUCATION AND TRAINING

TONGA FORM SIX CERTIFICATE 2015

GEOGRAPHY QUESTION and ANSWER BOOKLET

Time allowed: Three Hours

INSTRUCTIONS

1. Write your **Student Personal Identification Number (SPIN)** on the top right hand corner of this booklet.
2. Answer ALL QUESTIONS. Write your answers in the spaces provided in this booklet.
3. If you need more space for answers, ask the Supervisor for extra paper. Write your SPIN on all extra sheets used and clearly number the questions. Attach the extra sheets at the appropriate places in this booklet.
4. Illustrate your answers with relevant maps and diagrams. You will need an accurate ruler and you may use a calculator if you wish.

	Pages	Time (mins)	Total
SECTION A Living with Natural Hazards	2 - 7	36	20
SECTION B Use and Management of Water Resources	8 - 12	36	20
SECTION C Consequences of Population Growth	13 - 17	36	20
SECTION D Challenge of Urbanization and Urban Environment	18 - 23	36	20
SECTION E Geographic Perspectives on Tourism	23 - 28	36	20
TOTAL	28 pages	180 mins	100 marks

Check that this booklet contain pages 2-31 in the correct order. Pages 29-31 has been deliberately left blank.

In addition to this booklet, you should also receive a Resource Booklet (Sheet No. 6/2) and a Topographical Map of LAKE TAUPO SURROUNDING AREAS.

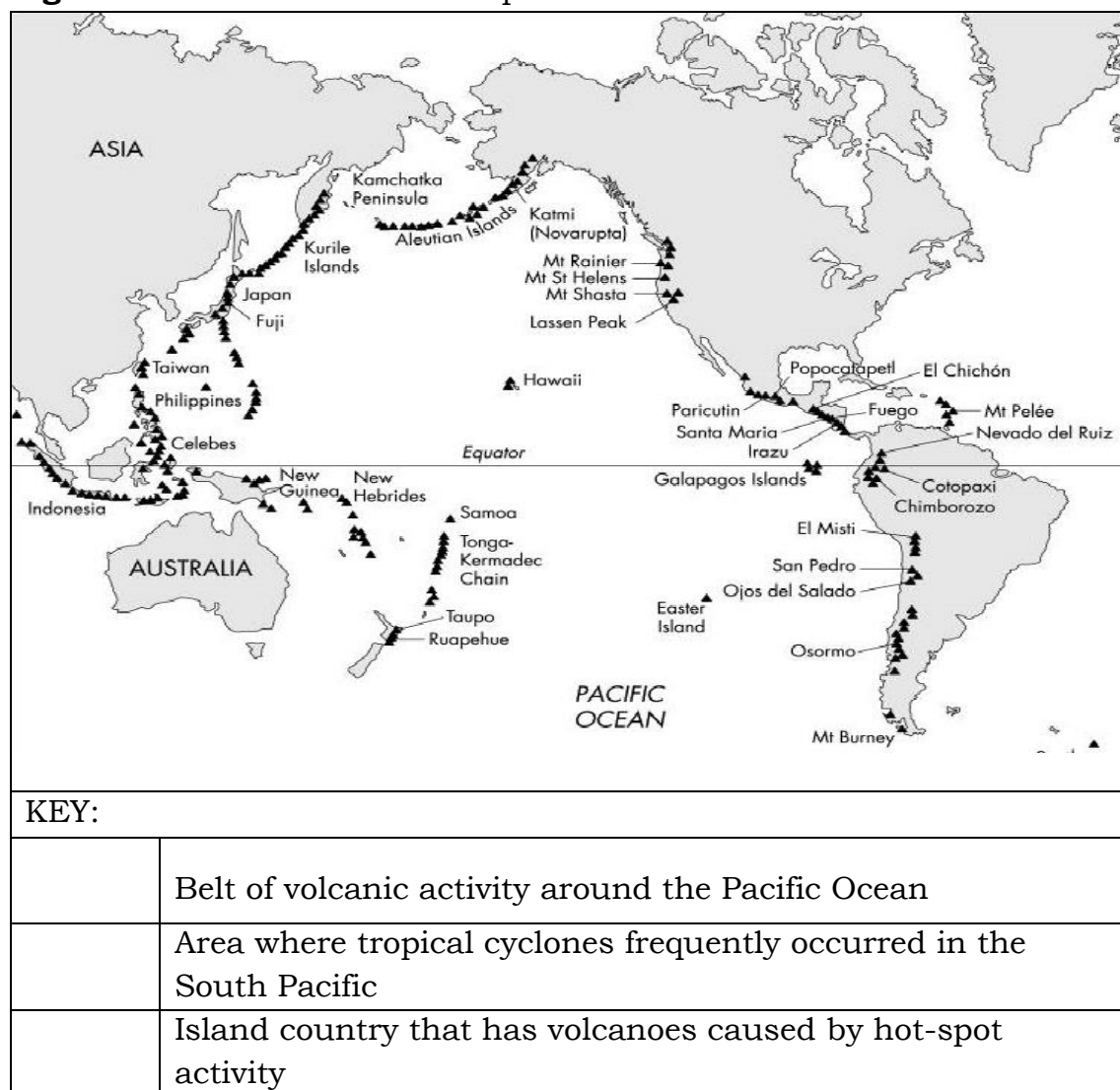
YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

SECTION A: LIVING WITH NATURAL HAZARDS**[20 marks]**

Spend about 36 minutes answering this question.

Question 1: WORLD DISTRIBUTION OF NATURAL HAZARDS

- a. On the world map (**Figure 1**) below,
- Draw a boundary to show the belt of volcanic activity around the Pacific Ocean.
 - Locate ONE area where tropical cyclones frequently occurred in the South Pacific.
 - Circle ONE island country that has volcanoes caused by hot-spot activity
- Complete the Key accordingly.

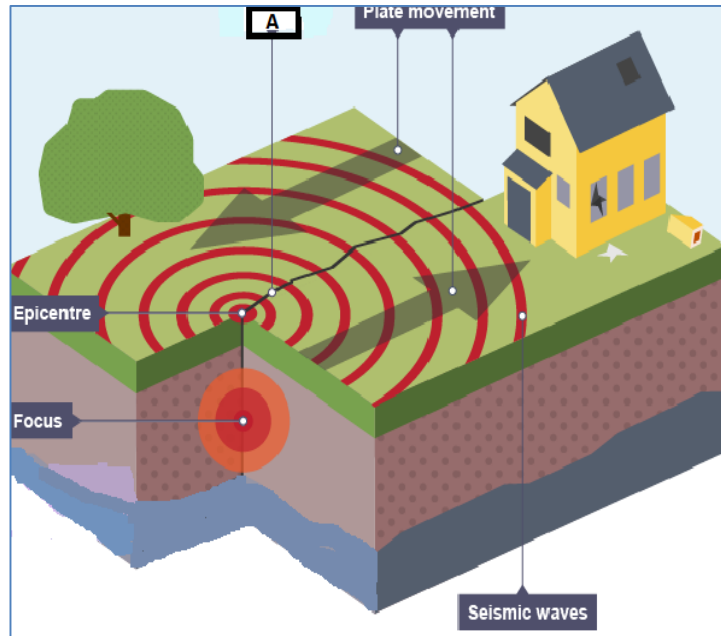
Figure 1: The World Hazard Map

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Question 2: FEATURES OF EARTHQUAKES

Study **Figure 2** then answer the questions that follow.

Figure 2: Main features of earthquakes



- a. State the term given to the line labelled **A**.

- b. Describe ONE process shown in **Figure 2** that is involved in causing earthquakes to occur.

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Question 3: FACTORS CAUSING TROPICAL CYCLONES

Study **Figure 3** below to answer the questions that follow.

Figure 3: A newspaper clip on the formation of Hurricane Mitch, Caribbean 1998.

Hurricane Mitch formed over the Caribbean Sea and hit Central America in October 1998, reaching wind speeds of 180mph. There was a very hot summer that year which allowed sea temperatures in the Caribbean to reach 27°C. An area of low pressure was created which accelerated the hurricane formation.

Winds became stronger and stronger as air rose more rapidly, Mitch became a tropical storm and then a hurricane on 23 October 1988.

- a. Explain TWO factors mentioned in the newspaper clip that caused the formation of :

Hurricane Mitch.

i) _____

ii) _____

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Question 4: EFFECTS OF NATURAL HAZARDS

Study **Figure 4** below then answer the questions that follow.

Figure 4: A comparison of differential impacts of cyclones in Bangladesh (2007) and Myanmar (2008)

	Bangladesh: Cyclone Sidr, 2007	Myanmar: Cyclone Nargis, 2008
Tidal wave (and storm surge)	5 to 6 metres	3.5 to 7.0 metres
Wind speed	240 km/hr	255 km/hr
Population evacuated	3 million	None
Deaths	3,406	84,537
Missing	1,001	53,836
Population “severely” affected	1 million	2.4 million
Total losses and damage	US\$1,674 million	US\$4,134 million
Human Development Index (2007)	140	132
Per capita GDP (2007 values)	PPP\$1,400	PPP\$1,900
Population below poverty line (2004)	45%	33%
Source: USAID, 2008. Available from www.usaid.gov/pressroom/pressreleases/2008/08/2008082001.html		

- a. List TWO evidences from **Figure 4** which show that Myanmar is more economically advantaged than Bangladesh.

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- b. With evidence from **Figure 4**, give ONE reason why Cyclone Nargis in Myanmar 2008 caused more negative impacts on their people than Cyclone Sidr, Bangladesh, 2007.

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- i) Analyse TWO positive effects of volcanic activity on people and their environment.
- ii) Evaluate TWO strategies for reducing the negative impacts of earthquakes and volcanoes on life and property in the Pacific islands.

- [illegible]

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[illegible]

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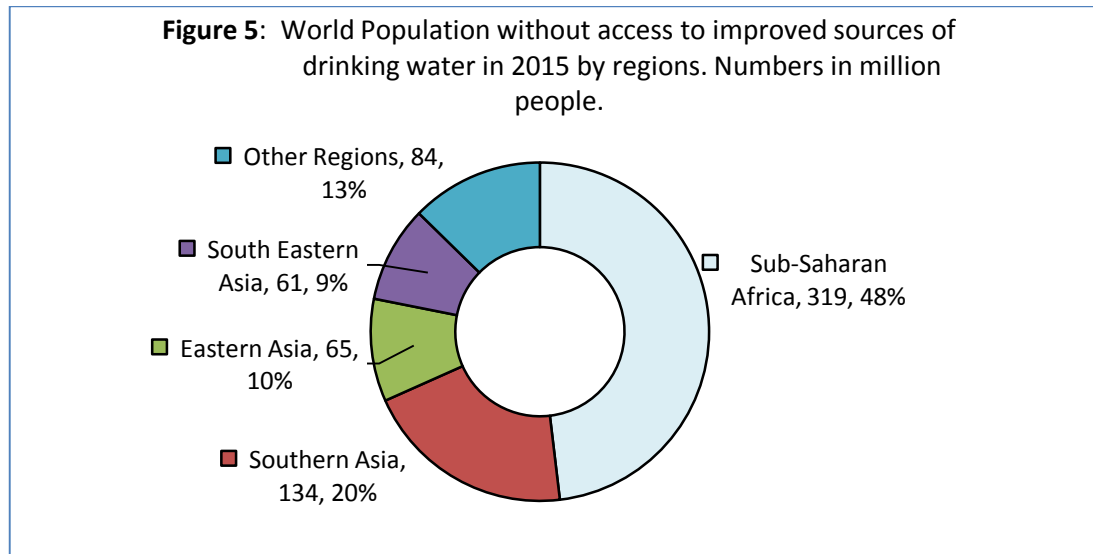
SECTION B: THE USE AND MANAGEMENT OF WATER RESOURCES

[20 Marks]

Spend about 36 minutes answering this question.

Question 1: WORLD DISTRIBUTION OF WATER RESOURCES

Study **Figure 5** then answer the questions that follow.



- a. Calculate the total number of people that lacks access to improved drinking water sources in 2015.

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- b. Describe the distribution of regions of people without access to improved sources of drinking water in 2015.

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Question 2: FACTORS AND PROCESSES THAT AFFECT WATER DISTRIBUTION

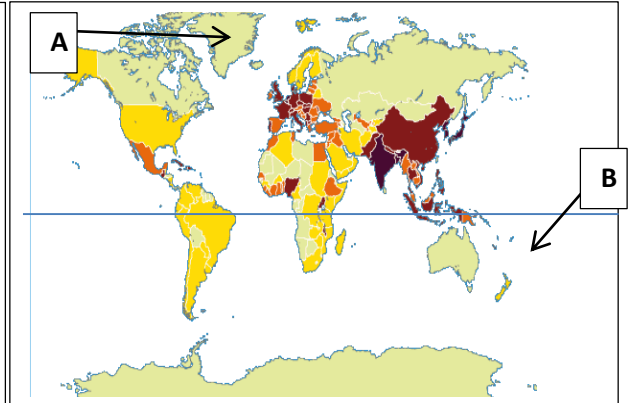
Study **Figure 6i** and **6ii** then answer the questions that follow.

Figure 6i: Nature and Water

The earth's water is constantly circulating. This Global System of circulation collects, purifies and distributes the Earth's fixed supply of water, powered by energy from the sun and by gravity.

Incoming solar energy evaporates water from the oceans, streams, lakes, soil and vegetation. About 84% of water vapor in the atmosphere comes from the oceans which cover 70% of the earth's surface and the rest comes from the land.

Figure 6ii: World Map with location of Country A & B



- a. Name the Global System of circulation referred to in **Figure 6i** above.

1 mark

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- b. State the water distribution process that the second paragraph of **Figure 6i** talks about.

1 mark

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- c. Compare **Country A** and **Country B** on **Figure 6ii** then explain how their location as a natural factor may affect water distribution experienced at each country.

Country	Location	Water Distribution
Country A	High latitudes	_____ _____ _____ _____
Country B	Low flat oceanic island in the middle of the Pacific ocean	_____ _____ _____ _____

3 marks

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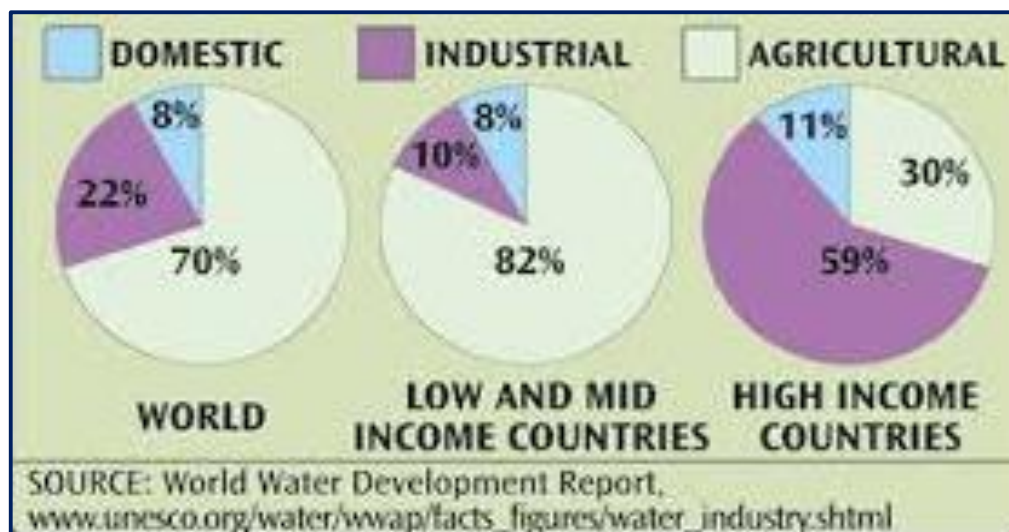
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Question 3: WATER USAGE AND THEIR EFFECTS ON PEOPLE AND THEIR ENVIRONMENT

Study **Figure 7** then answer questions that follow.

Figure 7: COMPETING WATER USE



- a. Identify the sector that dominates the use of fresh water in the world.

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- b. Describe the major difference in water use between **low and mid income countries** and **high income countries**.

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- c. Give ONE reason for different water usage between the **low and mid income countries** and **high income countries**.

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NEMO warns the people of Tonga to be prepared for lesser rainfall, cooler air and calls for wise use and management of water in the next three months.

- i) Explain TWO strategies for managing water resources, giving examples of where these strategies are already being practiced.
- ii) Evaluate the usefulness of these TWO strategies for people living in developing countries like Tonga.

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- ii) Evaluate the usefulness of these TWO strategies for people living in developing countries like Tonga.

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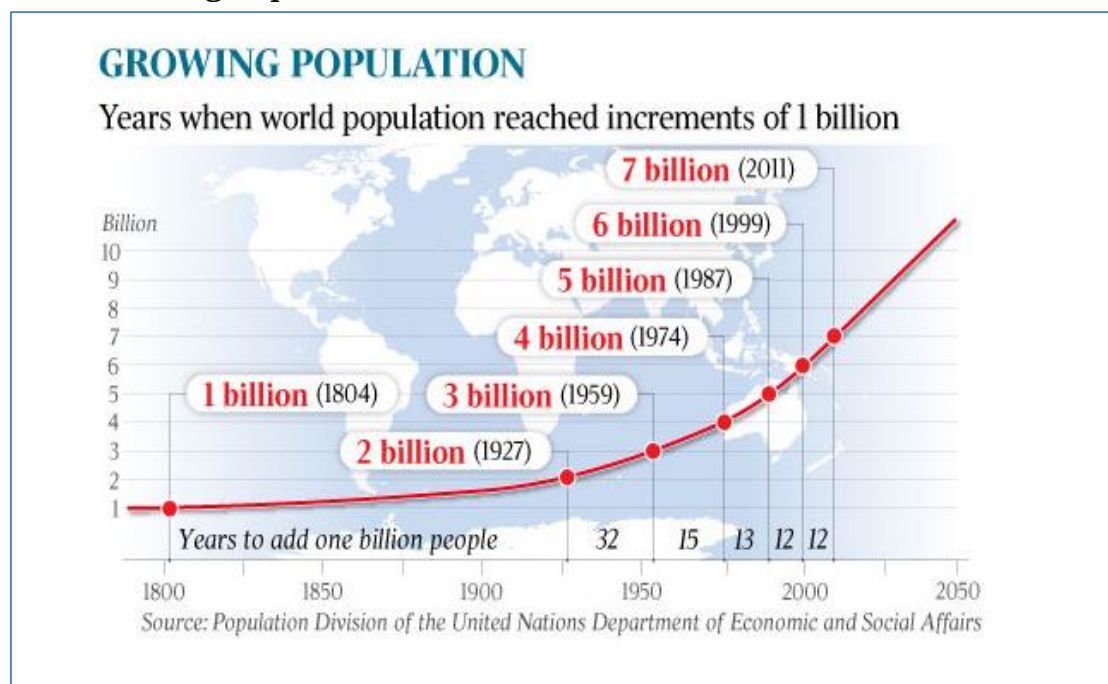
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SECTION C: CONSEQUENCES OF POPULATION GROWTH**[20 marks]**

Spend about 36 minutes answering this question.

Question 1: DISTRIBUTION OF WORLD POPULATION

Study **Figure 8** then answer the questions that follow.

Figure 8: Growing Population

- a. State the doubling time for the world population to reach 2 billion.

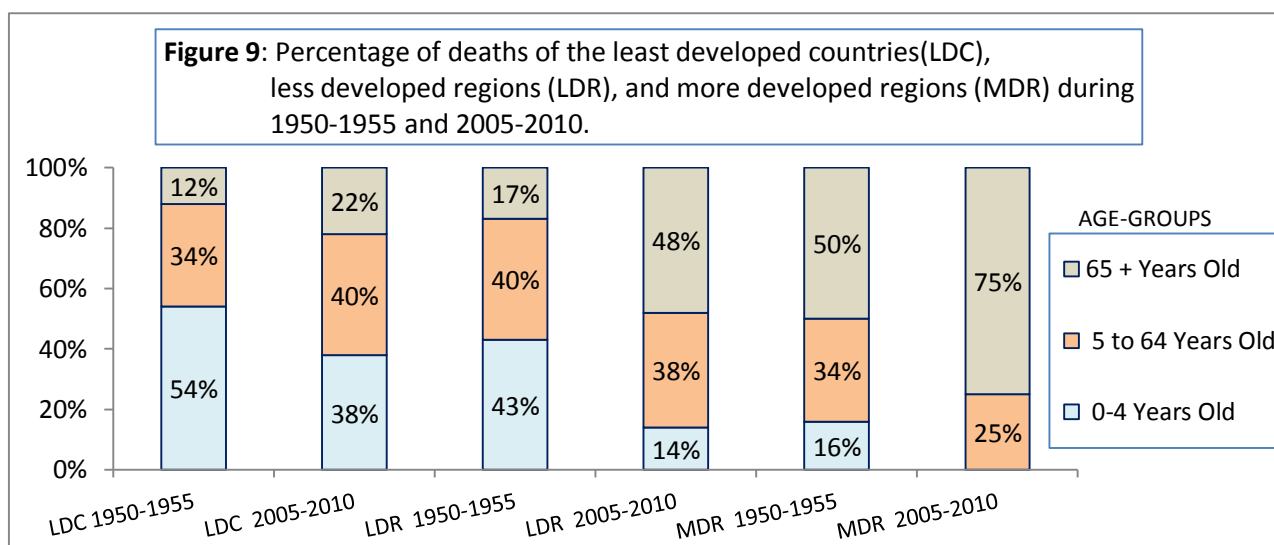
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- b. Describe the change over time of world population doubling time shown in **Figure 8** above.

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Question 2: NATURE AND FACTORS THAT INFLUENCE POPULATION GROWTH

Study **Figure 9** then answer the questions that follow.



- a. Identify the region that has the highest decline in the percentage of child age deaths from 1950-1955 to 2005-2010. Circle the correct answer.

- A. Least Developed Countries (LDC)
 B. Less Developed Regions (LDR)
 C. More Developed Regions (MDR)

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- b. Give ONE possible reason why the percentage of mid-age death declined in less developed regions (LDR) and more developed regions (MDR).

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- c. Give general explanations on changes of the percentage of deaths in TWO age-groups of your choice.

Age-group: _____

Age-group: _____

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Question 3: EFFECTS OF POPULATION CHANGE ON PEOPLE AND THEIR ENVIRONMENT

Study **Figure 10.i**, **Figure 10.ii** and **Figure 10.iii** then answer the questions that follow.

Figure 10.i



Figure 10.ii



Figure 10.iii



- a. State the effect of population growth portrayed by **Figure 10.i**

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- b. With named examples, relate each of the pictures in **Figure 10.ii** and **10.iii** as implications of population growth.

Examples: _____

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Implications:

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Question 4: PLANNING AND MANAGEMENT OF POPULATION CHANGE

With reference to named examples from less developed countries, write paragraphs to:

- i) Describe THREE strategies used for managing population growth
- ii) Evaluate the effectiveness of these TWO strategies.

- i) Describe THREE strategies used for managing population growth.

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ii) Evaluate the effectiveness of these TWO strategies.

[illegible]

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SECTION D: THE CHALLENGE OF URBANISATION AND URBAN ENVIRONMENTS **[20 Marks]**

Spend about 36 minutes answering this question.

Question 1: GLOBAL PATTERNS OF URBANISATION

Study **Figure 11** then answer the questions that follow.

Figure 11: World's Ten largest cities in 1995 and 2014.					
1995			2014		
CITY	COUNTRY	Population in million	CITY	COUNTRY	Population in million
1. Tokyo	Japan	26.8	1. Tokyo	Japan	38
2. Sao Paulo	Brazil	16.4	2. Delhi	India	25
3. New York	USA	16.3	3. Shanghai	China	23
4. Mexico city	Mexico	15.6	4. Mexico city	Mexico	21
5. Bombay	India	15.1	5. Mumbai(Bombay)	India	21
6. Shanghai	China	15.1	6. Sao Paulo	Brazil	21
7. Los Angeles	USA	12.4	7. Osaka	Japan	20
8. Beijing	China	12.4	8. Beijing	China	19
9. Calcutta	India	11.7	9. New York	USA	18.5
10. Seoul	South Korea	11.6	10. Cairo	Egypt	18.5

- a. Identify the city with the fastest growing population between 1995 and 2014.

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- b. Describe ONE global pattern of urbanisation shown in the table.

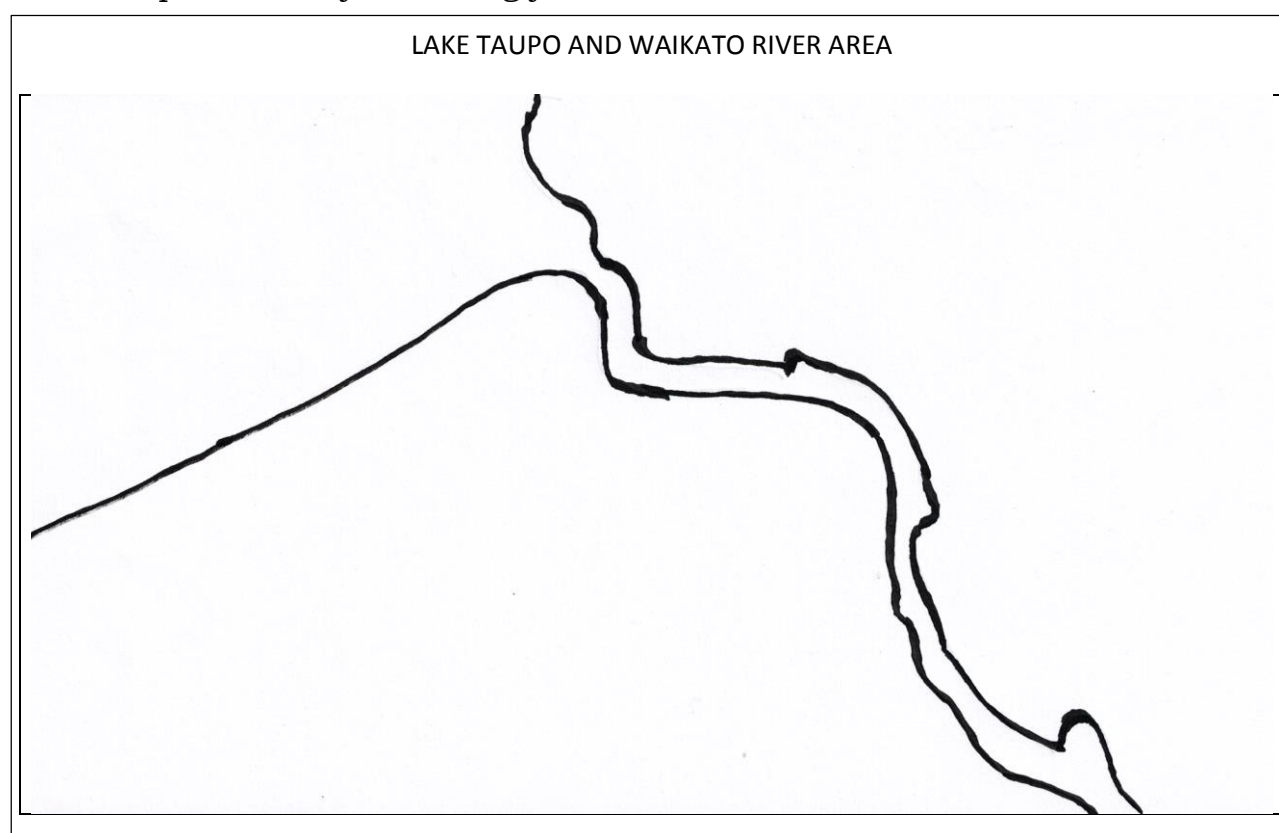
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Question 2: FACTORS AND PROCESSES OF URBANISATION

Refer to the aerial photographs of Lake Taupo and Waikato River Area, Photo 1 and Photo 2 on **Sheet No. 6/2 (Resource Booklet)** to answer the questions that follow.

- a. Complete the outline sketch of Lake Taupo and Waikato River area below to show the:
- transport feature that links settlements on both sides of Waikato river.
 - location of the commercial zone.
 - residential area on the foreground of the photo.

Complete the key accordingly.



KEY	
	Land transport feature that links settlements on both river sides
	Commercial zone
	Residential area on foreground of the photo

1 mark			
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- b. Describe ONE physical factor that encouraged the development of this urban settlement.

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- c. Compare the two aerial photos to identify which ONE letter A, B, or C in Photo 1 represents the point where the photographer stood when taking Photo 2.

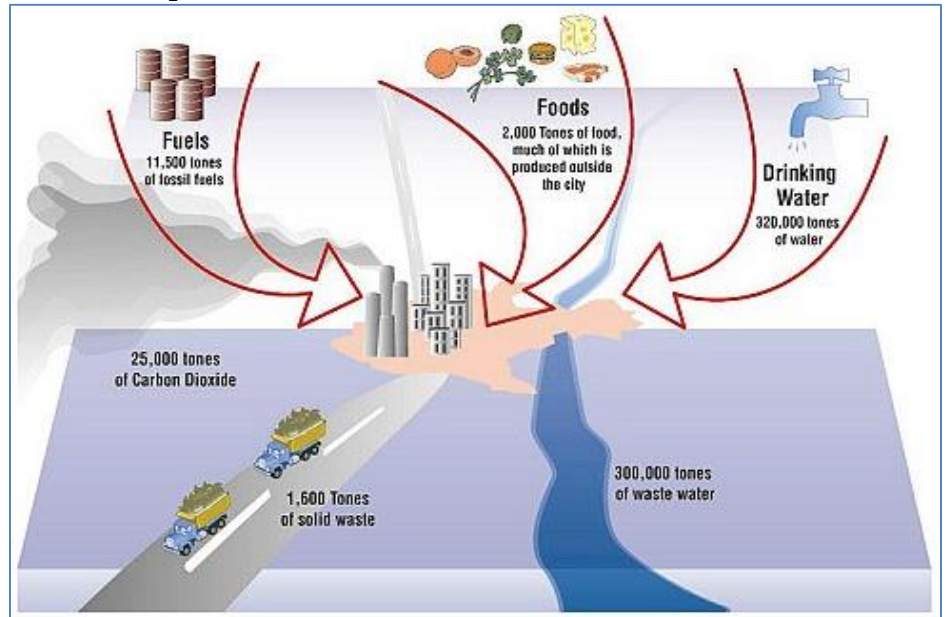
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Question 3: EFFECTS OF URBAN GROWTH

Study **Figure 12** then answer the questions that follow.

Figure 12: Urban Flows



- a. Describe ONE item of evidence from **Figure 12** which shows that cities benefit the rural areas.

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- b. Explain ONE negative impact of cities on the natural environment shown by **Figure 12** above.

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- i) Describe TWO national planned responses for managing urbanisation.
- ii) Evaluate the effectiveness of these TWO national planned responses.

i) Explain TWO national planned responses for managing urbanisation.

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ii) Evaluate the effectiveness of these TWO national planned responses.

[illegible]

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SECTION E: GEOGRAPHIC PERSPECTIVES ON TOURISM [20 MARKS]

Spend about 36 minutes answering this question.

Question 1: NATURE AND WORLD DISTRIBUTION OF TOURISM

Study **Figure 13** then answer the questions that follow.

Figure 13: International Tourist Arrivals by Region of Destination, 1980-2030

REGIONS	1980	2010	2030
MIDDLE EAST	3%	3%	8%
AFRICA	3%	5%	7%
AMERICAS	23%	16%	14%
ASIA & THE PACIFIC	8%	22%	30%
EUROPE	63%	51%	41%

- a. Describe TWO distribution patterns of world tourism industry over the years shown above.

i) _____

ii) _____

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- b. Draw an appropriate graph type to represent the forecasted international tourist arrivals for 2030. Apply all drawing conventions.

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Question 2: FACTORS THAT INFLUENCE THE GROWTH OF TOURISM

Refer to the Topographic Map of Lake Taupo Surrounding Areas (**Sheet No. 6/2**) to answer the questions that follow.

a. On the outline map of Lake Taupo Surrounding Areas below, locate the:

- i) Tokaanu Tailrace Canal
- ii) Area of 900m above of Kuharua mountain
- iii) Tokaanu settlement area

Complete the key accordingly

LAKE TAUPO AND SURROUNDING AREAS	
	
KEY	
	Tokaanu Tailrace Canal
	Area of 900m above of Kuharua mountain
	Tokaanu settlement area

1 mark			
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- b. Describe ONE physical factor from the map that may influence the growth of tourism in the area

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Question 3: EFFECTS OF TOURISM ON PEOPLE AND THEIR ENVIRONMENT

Study **Figure 14** then answer the questions that follow.

Figure 14: Nauru International Airport



- a. Describe ONE effect that Nauru International Airport has on the Nauru economy.

2 marks	
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- b. Explain ONE impact that the Nauru International Airport has on the natural environment.

2 marks	
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- i) Describe TWO ways of how tourism is being planned and managed in developing countries.
- ii) Evaluate the effectiveness of these TWO ways of planning and managing tourism so that its benefits are maximized and its drawbacks minimized.

[illegible]

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- ii) Evaluate the effectiveness of the TWO ways of planning and managing tourism described in i. so that the benefits are maximized and its drawbacks are minimized.

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TONGA FORM SIX CERTIFICATE

GEOGRAPHY

2015

(FOR MARKER'S USE ONLY)

SECTION	MARK	CHECK MARKER	TOTAL
A			20
B			20
C			20
D			20
E			20
TOTAL MARKS			100