

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD
UNIVERSITY OF MALTA, MSIDA
MATRICULATION EXAMINATION
INTERMEDIATE LEVEL
SEPTEMBER 2014

SUBJECT: GEOGRAPHY
DATE: 5th September 2014
TIME: 4.00 p.m. to 7.00 p.m.

Directions to Candidates

Answer a total of FIVE questions: one question from each of the four Sections and a fifth question from any Section.
The use of non-programmable calculators is permitted.
All questions carry equal marks.

Section 1: Physical Geographical Processes

1. Figure 1 shows a cross-section of a volcano.



Figure 1: Cross-section of a composite volcano.
(Source: <http://www.fotolibra.com>)

- Name **one** intrusive and **one** extrusive volcanic landform visible in figure 1. (2 marks)
- Describe the difference between intrusive and extrusive volcanic landforms. (6 marks)
- Explain the formation and main characteristics of a composite volcano. Use diagrams to illustrate your answer. (12 marks)

2. (a) Define the terms **depression** and **anticyclone** in weather systems. (4 marks)
 - (b) What is the difference in air circulation in a depression and an anticyclone? Include diagrams to illustrate your answer. (10 marks)
 - (c) During which seasons are depressions and anticyclones likely to influence the weather of the Maltese Islands and why? (6 marks)
3. A drainage basin is an open system with inputs and outputs.
 - (a) Name and briefly describe **one** input and **one** output of a drainage basin. (6 marks)
 - (b) With the help of figure 2, explain the difference between:
 - (i) infiltration and percolation; (4 marks)
 - (ii) throughflow and groundwater flow. (4 marks)
 - (c) Explain how vegetation can help to prevent flooding in drainage basins. (6 marks)

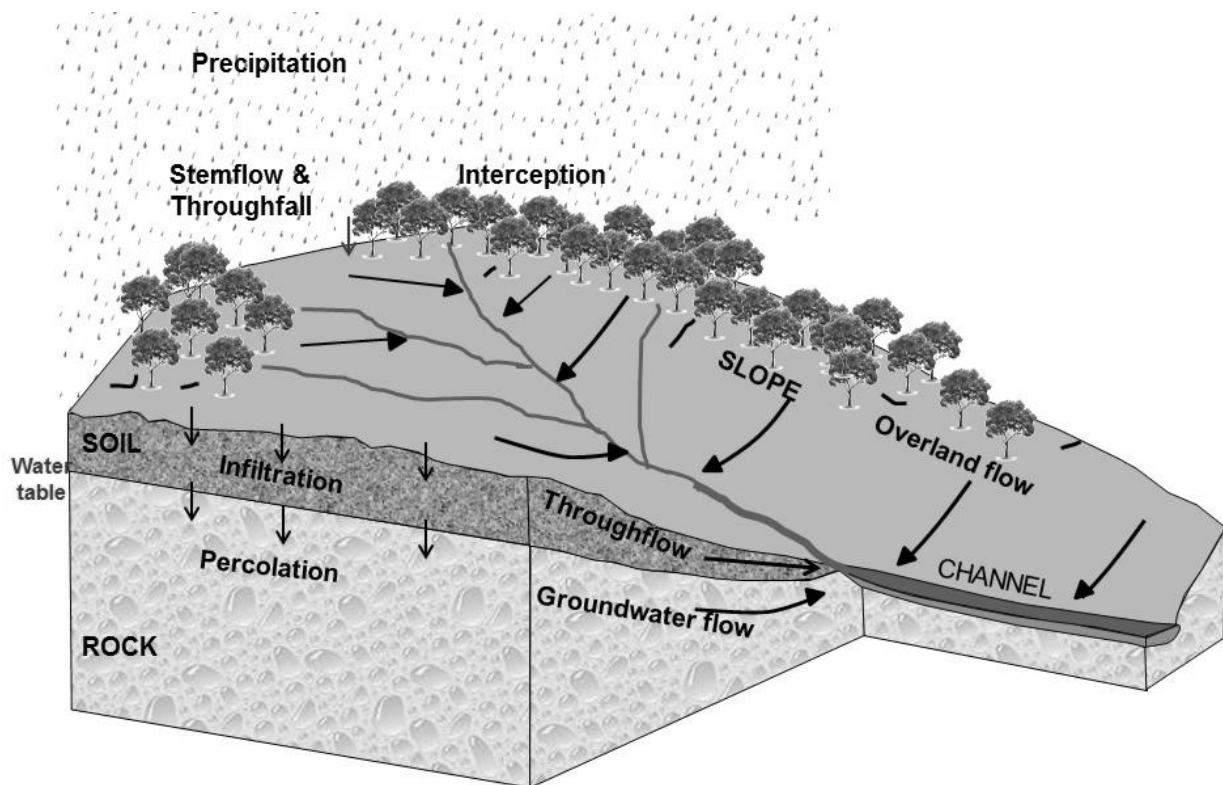


Figure 2: Some elements of a drainage basin.
 (Source: <http://www.coolgeography.co.uk>)

Section 2: Human Geographical Processes

4. Some European countries have an ageing population.
 - (a) Define the term **ageing population**. (3 marks)
 - (b) Name **two** countries that have an ageing population. (2 marks)
 - (c) Describe the **two** main factors that have brought about an ageing population in various European countries. (6 marks)
 - (d) Explain **three** effects that an ageing population might have on the economy of a country. (9 marks)

5. Many of the largest cities around the world are built at a wet-point site.
- Define the term **wet-point site**. (3 marks)
 - Give **two** examples of such cities. (2 marks)
 - With reference to specific examples, describe **three** advantages of a wet-point site. (9 marks)
 - With reference to specific examples, describe the problems associated with a wet-point site location. (6 marks)
6. (a) Define the term **aquaculture**. (2 marks)
- (b) With reference to figure 3, describe the major changes in global fish production during the period 1950 to 2011. (6 marks)
- (c) Explain **three** reasons for the changes in aquaculture production between 1950 and 2011. (12 marks)

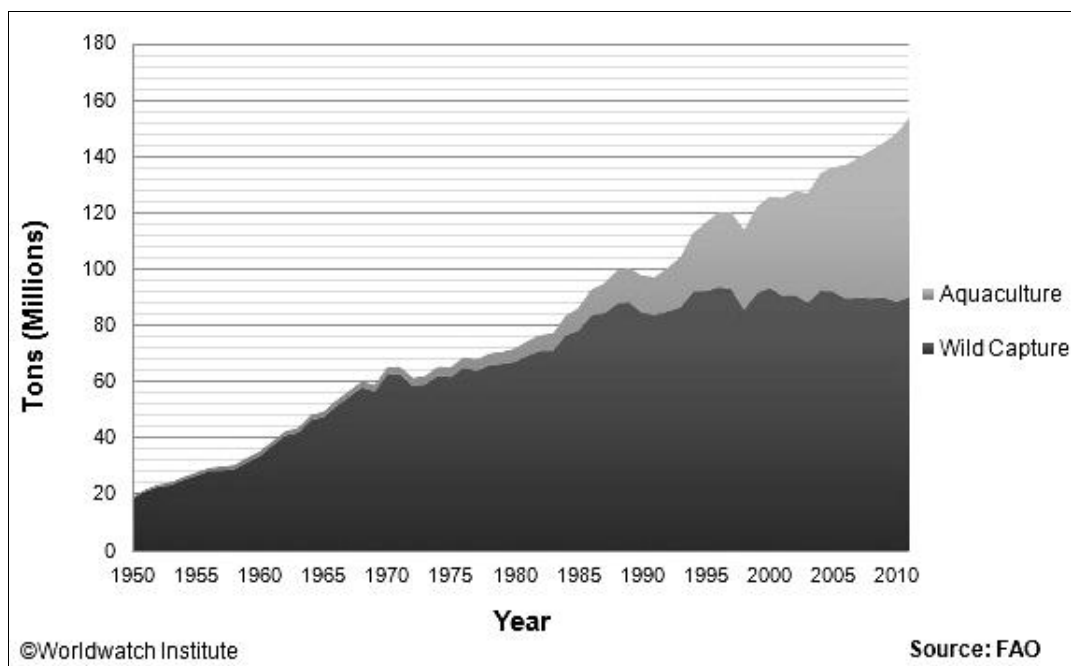


Figure 3: Global fish production, 1950-2011
(Source: www.fao.org)

Section 3: The Man-Environment Relationship

7. (a) Name **two** examples of natural hazards. (2 marks)
- (b) By referring to specific examples, explain **three** reasons why the impact of natural hazards tends to be greater in developing countries. (8 marks)
- (c) By referring to specific examples, describe the preventive measures taken by any **one** developed country to any **one** natural hazard. (10 marks)
8. (a) Briefly describe the characteristics of **two** main types of vegetation communities found in the Maltese Islands. (12 marks)
- (b) Explain the adaptations of the vegetation communities chosen to the Mediterranean climate. (8 marks)
9. (a) Define the terms **global warming** and **climate change**. (4 marks)
- (b) Explain how **two** human activities are contributing to global warming. (8 marks)
- (c) Scientists believe that global warming is responsible for extreme weather conditions. Explain this statement. (8 marks)

Section 4: Fieldwork and Mapwork Skills

10. Table A shows the results of two traffic surveys conducted by a group of residents on Saturday 6th November 2010 and Tuesday 6th May 2013 travelling up the main road of the village.
- Describe **one** method how the data in Table A can be presented in order to make it easier to interpret. Provide a sketch of your suggested method. (6 marks)
 - Explain the reasons why you think that the method of presentation you mentioned in (a) would make data interpretation easier. (8 marks)
 - Explain **one** major drawback of the survey carried out by the residents. (6 marks)

Survey year	Cars and small vans		Lorries		Coaches		Buses		Motor Cycles	
	2010	2013	2010	2013	2010	2013	2010	2013	2010	2013
7am - 8am	595	560	3	17	4	2	6	13	11	7
8am - 9am	670	670	6	13	3	1	7	14	5	2
9am - 10am	445	380	6	3	4	9	8	19	2	3
10am - 11am	400	326	3	8	2	2	6	15	0	0
11am - 12am	310	374	4	8	4	4	14	15	0	1
12am - 1pm	430	403	2	11	1	4	7	14	3	3
1pm - 2pm	395	315	4	11	2	0	8	16	2	2
2pm - 3pm	490	485	1	0	5	0	7	11	6	4
3pm - 4pm	590	460	7	2	3	2	7	10	8	6
4pm - 5pm	665	639	4	7	4	2	10	20	5	9
5pm - 6pm	710	755	3	5	0	0	6	11	4	9
6pm - 7pm	495	564	1	1	0	0	5	13	2	4
7pm - 8pm	370	330	0	1	0	0	2	3	0	10
	6565	6261	42	87	33	26	93	174	48	60

Table A: Traffic survey results for 2010 and 2013.

11. The use of quadrats is an important tool in geographic field studies and investigation.
- What is a **quadrat**? (2 marks)
 - Give **one** example of an investigation that would require the use of a quadrat. (4 marks)
 - Describe how you would use the quadrat in the investigation you mentioned in (b). (10 marks)
 - Explain some problems that you may come across in using the quadrat for the investigation you chose in (b). (4 marks)
12. Most geography investigations require the collection of both primary and secondary data.
- What is the difference between **primary** and **secondary** data? (6 marks)
 - Give examples of primary and secondary sources you might use for a geographical investigation of your choice. (10 marks)
 - Explain **two** problems you might come across when collecting primary data for the investigation you chose in (b). (4 marks)