

# VICTORIA JUNIOR COLLEGE

## Preliminary Examinations 2014

**GEOGRAPHY Higher 1**

**8812/01**

**Monday 15<sup>th</sup> September 2014**

**3 hours**

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### **READ THESE INSTRUCTIONS FIRST**

Write your name and class on all answer sheets that you hand in.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

#### **Section A**

Answer **four** questions.

#### **Section B**

Answer **one** question.

#### **Section C**

Answer **one** question.

Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

The number of marks is given in brackets [ ] at the end of each question or part question.

You are reminded of the need for good English and clear presentation in your answers.

At the end of the examination, fasten all your work securely together.

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**This paper consists of 6 printed pages.**

## **Section A**

Answer **four** questions.

Questions 1 carries 14 marks. Questions 2, 3 and 4 carry 12 marks each.

You should allocate your time accordingly.

### **Lithospheric Processes, Hazards and Management**

- 1 Fig. 1A shows the epicentre of the 2011 Tohoku earthquake. Fig. 1B shows a tsunami evacuation plan in Japan.
- (a) With reference to Fig. 1A, describe and explain the formation of tsunamis. [5]
- (b) With reference to Fig. 1B, explain the information needed to develop this evacuation plan. [5]
- (c) With reference to Fig. 1B, what are some possible limitations of the tsunami evacuation plan? [4]

### **The Globalisation of Economic Activity**

- 2 Fig. 2 shows the Human Development Index (HDI) in 2011.
- (a) Briefly explain why the HDI is a better measure of development than GDP per capita. [3]
- (b) With reference to Fig. 2, describe the variations in the HDI. [4]
- (c) Outline the limitations of the data shown in Fig. 2 in reflecting the variations in the level of development across the world. [5]

## **Hydrologic Processes, Hazards and Management**

### **3 EITHER**

Table 1 shows the magnitude of 5-year and 10-year floods for 3 rivers in Mobile County, Alabama, in the United State.

- (a) With reference to Table 1, compare the discharge levels for the 5-year and 10-year floods for Chickasaw Creek, Crooked Creek and Fowl River. [3]
- (b) Explain how the information shown in Table 1 can be used in flood management. [4]
- (c) With reference to examples you have studied, explain the factors that may influence the impacts of floods. [5]

## **Urban Issues and Challenges**

### **3 OR**

Fig. 3 shows population distribution in the Jabodetabek region, Indonesia in 2010.

- (a) Describe the distribution of population across the growth centres in the Jabodetabek region as seen in Fig.3 . [3]
- (b) Suggest reasons for the distribution described in (a). [4]
- (c) Describe possible problems that may arise due to the distribution described in (a). [5]

## **Lithospheric Processes, Hazards and Management & Hydrologic Processes, Hazards and Management**

### **4 EITHER**

Fig. 4 shows the London artesian basin.

- (a) Explain why clays are relatively impermeable. [3]
- (b) With reference to Fig. 4, explain how geology can affect groundwater storage. [4]
- (c) Describe how the overuse of groundwater may impact the physical environment. [5]

## **The Globalisation of Economic Activity & Urban Issues and Challenges**

### **4 OR**

Fig. 5A shows Singapore's Technology Corridor in Western Singapore.

Fig. 5B shows a summary of business expenditure and public expenditure on R&D.

Fig. 5C shows the citizenship of research scientists and engineers in Singapore from 1990 to 2012.

- (a) With reference to Fig. 5A, describe the characteristics of the Technology Corridor. [3]
- (b) Imagine you are a city planner. With reference to Fig. 5A, what are some considerations you will make in deciding to locate One-North in that part of the city? [4]
- (c) With reference to Figs. 5A-C, explain the role of foreign direct investment (FDI) and the government in the development of the Technology Corridor. [5]

**Section B Physical Geography**  
Answer **one** question from this section.

**Lithospheric Processes, Hazards and Management**

**5 EITHER**

- (a) Describe and explain why volcanoes vary. [9]
- (b) To what extent are tropical and temperate karst landforms different? [16]

**5 OR**

- (a) Compare the features of tors and inselbergs and outline why these landforms are not found in the humid tropics. [9]
- (b) To what extent are mass movements always hazardous? [16]

**Hydrologic Processes, Hazards and Management**

**6 EITHER**

- (a) Distinguish the conditions under which Saturation Overland Flow (SOF) and Hortonian Overland Flow (HOF) occur. [9]
- (b) Examine why issues related to water quality and water quantity are difficult to resolve. [16]

**6 OR**

- (a) Describe and explain how changes in channel roughness and hydraulic radius with distance downstream may influence channel processes. [9]
- (b) Discuss the extent to which human activities may be an important factor in influencing river discharge. [16]

**Section C Human Geography**  
Answer **one** question from this section.

**The Globalisation of Economic Activity**

**7 EITHER**

- (a) With reference to the manufacturing and service sectors, explain why some countries are more attractive to TNCs than others. [9]
- (b) To what extent have supranational bodies narrowed the development gap at different scales? [16]

**7 OR**

- (a) Describe the impacts of the New International Division of Labour (NIDL) on DCs and LDCs. [9]
- (b) To what extent have states played the most important role in facilitating economic development? [16]

**Urban Issues and Challenges**

**8 EITHER**

- (a) Explain how historical forces and globalisation of economic activity may impact urban structure. [9]
- (b) With reference to named examples, assess the extent to which decentralisation may be considered undesirable. [16]

**8 OR**

- (a) Compare the nature of housing problems in DCs and LDCs. [9]
- (b) To what extent is the bid rent theory applicable in urban areas today? [16]