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**DUNMAN HIGH SCHOOL
PRELIMINARY EXAMINATION
Year 6**

HIGHER 1 GEOGRAPHY

8812/01

Paper 1

Wednesday

16 September 2015

3 hours

READ THESE INSTRUCTIONS FIRST

Write your name and class clearly on **all** the work 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.

You are advised not to spend more than one hour 30 minutes on Section A.

The **Insert** contains all the Figures and the Photograph referred to in the question paper. You should make reference to appropriate examples studied in the field or the classroom, even where such examples are not specifically requested by the question. Diagrams and sketch maps should be drawn wherever they serve to illustrate an answer. The outline world map may be annotated and handed in with relevant answers. You are reminded of the need for good English and clear presentation in your answers.

Start each question on a fresh sheet of paper.

At the end of the examination, fasten all your work securely together.
The number of marks is given in the brackets [] at the end of each question or part question.

This document consists of **6** printed pages including the cover page.

[Turn over

Section A

Answer **four** questions from this section.

Lithospheric Processes, Hazards and Management

- 1 Figs. 1A and 1B are maps with information on seismic hazards in California. Fig. 1C shows the geology of California.
- (a) How well does the information in Fig. 1A describe the distribution of economic losses shown in Fig. 1B? [3]
 - (b) Based on information in Figs. 1A and 1C **only**, explain how the difference in level of economic losses in Los Angeles (County A) and Tulare (County B) in Fig. 1B can be explained by geology. [3]
 - (c) Explain the mitigating actions that should be taken to reduce economic losses in Los Angeles (County A) and San Bernadine (County C) in Fig. 1B. [4]
 - (d) Outline **one** limitation of maps such as Fig. 1A for the management of seismic hazards. [2]

The Globalization of Economic Activity

- 2 Fig. 2A shows the global locations of the various functional units of Solectron in 2001. Solectron is an electronics manufacturing transnational corporation (TNC) producing high-technology products such as solar panels, which originated in the United States of America (USA). The corporate headquarters is located in California, USA.

Fig. 2B shows the world outline map with the names of countries of the world.

- (a) Describe the distribution of the global and regional headquarters of Solectron as shown in Fig. 2A. [1]
- (b) Explain **one** reason for the distribution of global and regional headquarters as observed in (a). [2]
- (c) Describe the spatial distribution of Solectron's manufacturing facilities and suggest **one** reason for the distribution observed. [3]
- (d) Discuss how you would go about conducting surveys to determine the impacts of TNCs (such as Solectron) in areas where they operate. [6]

Hydrological Processes, Hazards and Management

3 EITHER

- 3 Fig. 3A shows three sub-catchments of the River Soar, Leicestershire, England with similar geology and relief. River Upper Soar and River Sence have similar area and perimeter. Fig. 3B shows the hydrograph of River Wreake in response to a storm event.
- (a) With reference to information from Fig. 3A, explain how the hydrograph characteristics of River Wreake in Fig. 3B can be explained by basin characteristics. [5]
- (b) With reference to the two sub-catchments, River Upper Soar and River Sence in Fig. 3A:
- (i) calculate the bifurcation ratio for each sub-catchment; [2]
- (ii) name the sub-catchment with the higher flood risk potential based on the respective bifurcation ratios; [1]
- (iii) explain two actions that may be taken to reduce the risk of floods in this sub-catchment. [4]

Urban Issues and Challenges

3 OR

- 3 Fig. 4 shows changes in land value over time in an industrial city.
- (a) Identify the functional zones between:
- (i) CBD and Q; [1]
- (ii) Q and R. [1]
- (b) Describe the changes in the relationship between land value and distance from the CBD as shown in Fig. 4. [5]
- (c) Suggest reasons why land value in zone 'S' increases during the declining industrial stage in this city. [5]

Lithospheric and Hydrologic Processes, Hazards and Management

4 EITHER

- 4 Photograph A shows a close-up of a limestone landform in a temperate climate.
- (a) Name the features **X** and **Y**, shown in Photograph A, which form part of the limestone landform. [2]
- (b) Explain the role of weathering in the formation of the limestone landform shown in Photograph A. [6]
- (c) Figs. 5A and 5B show two river regimes: **A** and **B** for two catchments with generally similar rainfall and basin characteristics but of different geology. One catchment is of shale and the other is of limestone.
- (i) Compare the main discharge characteristics between the two river regimes **A** and **B**. [3]
- (ii) Based on the discharge characteristics only, identify the river regime for the catchment with limestone geology. [1]
- (iii) Explain why the river regime you have chosen in **c(ii)** is typical of limestone catchments. [2]

The Globalization of Economic Activity and Urban Issues and Challenges

4 OR

- 4 Fig. 6A shows the Human Development Index (HDI) recorded in 2012. Fig. 6B shows the relationship between values of HDI and Gross National Income (GNI) per capita for the period between 1990 and 2012. Fig. 6C shows the relationship between values of HDI and level of urbanisation for countries with different levels of income.
- (a) Using Fig. 6A, describe the global pattern of HDI in 2012. [3]
- (b) With reference to Fig. 6B:
- (i) compare the changes in GNI per capita of very high HDI countries and low HDI countries between the period 1990 and 2012; [2]
- (ii) suggest a reason for the trends you observe in **b(i)**. You may use information from Fig. 6A in your answer. [2]
- (c) Describe and account for the pattern observed between values of HDI, income levels and level of urbanisation as shown in Fig. 6C. [7]

Section B

Answer **one** question from this section.

Lithospheric Processes, Hazards and Management**5 EITHER**

- (a) Distinguish between the formation and characteristics of the following landforms associated with tectonic activity: *rift valley* and *island arc*. [9]
- (b) With reference to examples, discuss the extent to which the scale and nature of earthquake impacts are influenced by the magnitude and intensity of earthquake events. [16]

5 OR

- (a) Explain the role of plate tectonics in the rock cycle. [9]
- (b) Explain the nature of weathering processes operating in the tropical environments. Discuss the role of weathering in the development of granite landforms in tropical environments. [16]

Hydrologic Processes, Hazards and Management**6 EITHER**

- (a) How does an understanding of *critical erosion velocity* and *settling velocity* help to explain how load is transported within a river channel? [9]
- (b) Explain how the development and form of channel patterns are a response to channel efficiency. [16]

6 OR

- (a) With the aid of diagrams, explain how rainfall events can result in variations in river discharge. [9]
- (b) With reference to an example or examples, discuss the view that in the management of water resources, the nature of conflicts of interest are more varied, the extent of the conflicts greater and more difficult to resolve between riparian states than within riparian states. [16]

Section C

Answer **one** question from this section.

The Globalization of Economic Activity**7 EITHER**

- (a) Using relevant examples, explain the processes and characteristics of globalization. [9]
- (b) With reference to examples, assess the suitability of the Human Development Index (HDI) and at least one other indicator in measuring the level of development of a country. [16]

7 OR

- (a) Distinguish between the following terms: *tertiary*, *quaternary* and *quinary industries*. [9]
- (b) With reference to examples, critically examine the role of supranational organisations in economic development. [16]

Urban Issues and Challenges**8 EITHER**

- (a) Using examples, explain why many countries are dominated by one or two large cities. [9]
- (b) With reference to an example or examples of urban settlements, assess the relative importance of the factors which have influenced the urban structure. [16]

8 OR

- (a) Using examples, explain why cities introduce re-imaging projects. [9]
- (b) Assess the success of management strategies to reduce transport problems in major urban areas. [16]