

INNOVA JUNIOR COLLEGE
JC 2 PRELIMINARY EXAMINATION
in preparation for General Certificate of Education Advanced Level
Higher 1

GEOGRAPHY

8812/01

Paper 1

24th August 2016
3 hrs

Additional Materials: Writing Paper
 1 Insert
 World Outline Map

READ THESE INSTRUCTIONS FIRST

Write your name and class 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 **all** questions.

Section B

Answer **one** question.

Section C

Answer **one** question.

The Insert contains the Figures, Photographs and Tables referred to in the questions.
Diagrams and sketch maps should be drawn whenever they serve to illustrate an answer.

The world outline 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.

At the end of the examination, fasten Section A separately from Sections B and C.
The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **6** printed pages, and **1** insert.

Section A



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[Turn over

Answer **four** questions from this section.

Question 1, 2 and 3 carry 12 marks and Question 4 carries 14 marks. You should allocate your time accordingly.

Lithospheric Processes, Hazards and Management

- 1** Fig. 1A shows the shake map of the 2016 Kumamoto Earthquake, which occurred on 16 April, 2016 in the City of Kumamoto, Kyushu Prefecture, Japan.

Fig. 1B shows the tectonic setting of Japan.

- (a)** With reference to Fig. 1A, describe the variation in intensity of the shaking from the earthquake in the city of Kumamoto and the surrounding areas in Kyushu. [3]
- (b)** Account for the occurrence of the Kumamoto earthquake using Fig. 1B. [4]
- (c)** Imagine that you are a government official dealing with emergency preparedness in the city of Kumamoto. Explain how you would map draw up a hazard map of the Kumamoto region, identifying the areas of high and low risks. [5]

The Globalisation of Economic Activity

- 2** Fig. 2A shows the number of employees in the toys and games manufacturing industry in China, India and Brazil.

Fig. 2B shows an article in AsiaNews on China's tainted toys.

- (a)** With reference to Fig. 2A, compare the employment trend in the toys and games manufacturing industry for the 3 countries. [3]
- (b)** List **one** impact of outsourcing. [2]
- (c)** Using information from both Figs. 2A and 2B, and your own knowledge, suggest how the number of employees in the toys and games manufacturing industry would have changed by 2016. [7]

Hydrologic Processes, Hazards and Management

- 3 EITHER** Photograph 3A shows the Kissimmee River of Florida, USA in the 1980s.
Photograph 3B shows the Kissimmee River after mitigation efforts in 2001.
Photograph 3C shows the Kissimmee River after its restoration in 2010.

- (a)** Explain 2 reasons why rivers flood. [4]
- (b)** With reference to Photograph 3B, describe the strategy used and explain how it mitigates floods. [4]
- (c)** Suggest reasons why there was a need to restore the Kissimmee River, as shown in Photograph 3C. [4]

Urban Issues and Challenges

- 3 OR** Table 1 shows the ICT Development Index for selected countries in 2011 and 2012.

- (a)** State how the position of Australia has changed from 2011 to 2012. [1]
- (b)** Using information from Table 1, describe how the ICT Development Index has changed between 2011 and 2012. [4]
- (c)** Suggest reasons for the change you have described in **3(b)**. [7]

Lithospheric Processes, Hazards and Management and Hydrologic Processes, Hazards and Management

4 EITHER Photograph 4A shows flood waters inundating a village in Xuancheng, in East China's Anhu province, on July 7, 2016.

Photograph 4B shows workers repairing a damaged road hit by heavy rainstorms in Fangshan District in Beijing.

Figure 4 shows an excerpt from an article describing the severity of the 2016 floods in China.

- (a)** Explain the relationship between climate and floods. [3]
- (b)** With reference to Photographs 4A, 4B and Fig. 4, describe the possible impacts of the 2016 floods on the physical and human environment in China. [6]
- (c)** "Flooding of this magnitude was last seen in the country in 1998". Evaluate the usefulness of this knowledge for future flood prediction. [5]

The Globalisation of Economic Activity and Urban Issues and Challenges

4 OR Table 2 shows the performance of metropolitans in relation to Gross Domestic Product (GDP) growth rates per capita and employment.

- (a)** Define the term 'metropolitan'. [2]
- (b)** Describe the performance of the cities shown in Table 2. [5]
- (c)** Suggest the challenges that might face the metropolitans in future. [7]

Section B Physical Geography

Answer **one** question from this section.

Lithospheric Processes, Hazards and Management

5 EITHER

- (a) Explain how changes to shear stress and shear strength can affect mass movement. [9]
- (b) Discuss the role of climate in the formation of surface and sub-surface limestone landforms. [16]

5 OR

- (a) With the use of examples, describe the differences between slide, heave and flow. [9]
- (b) To what extent is the level of development an integral factor in the success of strategies used to minimise the hazardous effects of volcanic eruptions? [16]

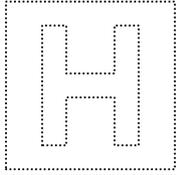
Hydrologic Processes, Hazards and Management

6 EITHER

- (a) Define the following terms: **drainage density; stream order; bifurcation ratio**. Explain how they may be used to describe the characteristics of a drainage basin. [9]
- (b) To what extent are climate and vegetation the principal factors influencing the hydrological processes in a drainage basin? [16]

6 OR

- (a) With the use of hydrographs to illustrate your answer, explain how changes in land use within a catchment area from woodland to crop cultivation affects discharge. [9]
- (b) Using examples, explain how conflicts of interest can occur in the management of river basins. [16]



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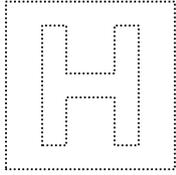
3 hrs

READ THESE INSTRUCTIONS FIRST

This Insert contains the Figures, Photographs and Tables referred to in the questions.

This document consists of **8** printed pages.





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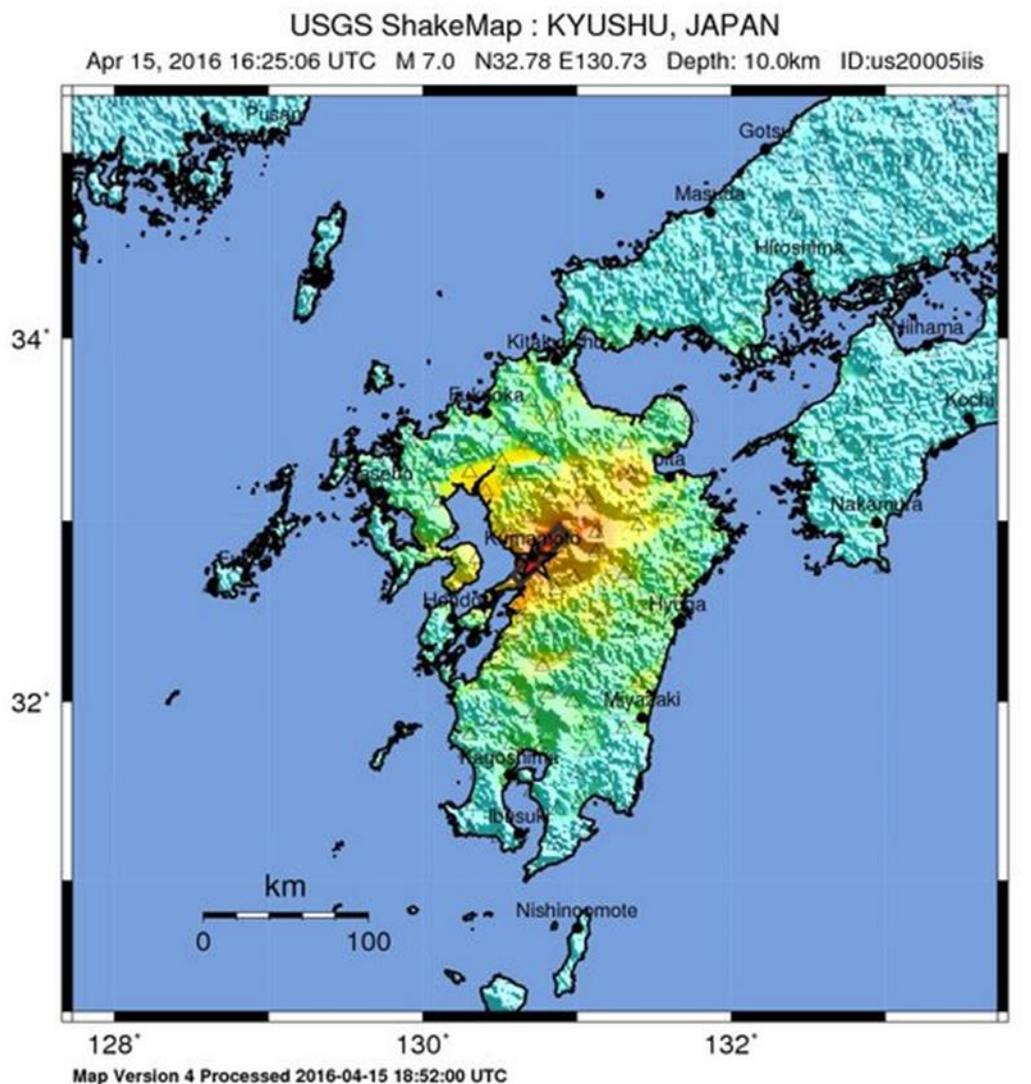
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Figs. 1A and 1B for Question 1

Fig. 1A

Shake map of the 2016 Kumamoto Earthquake of 2016

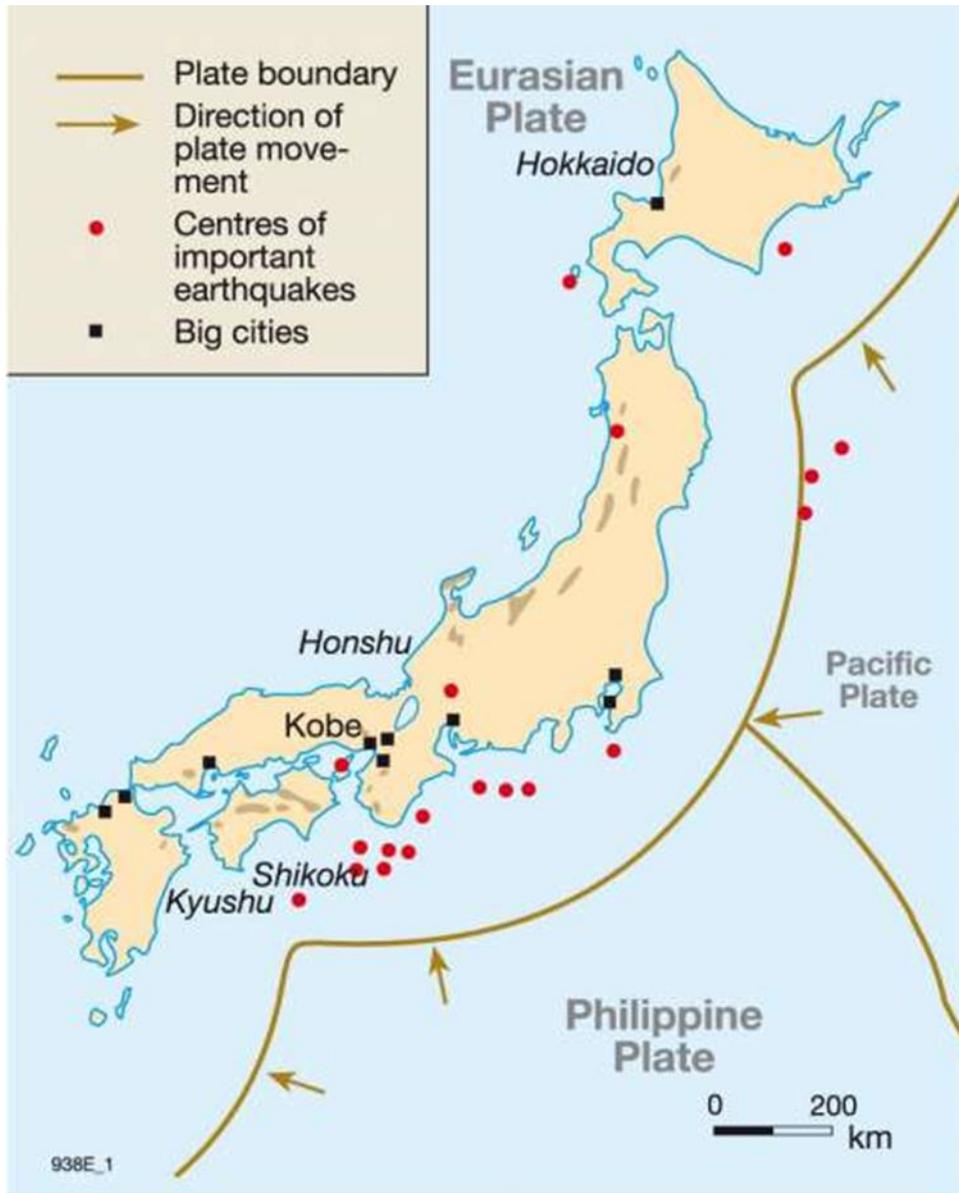


PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Mod./Heavy	Heavy	Very Heavy
PEAK ACC.(%g)	<0.05	0.3	2.8	6.2	12	22	40	75	>139
PEAK VEL.(cm/s)	<0.02	0.1	1.4	4.7	9.6	20	41	86	>178
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+

Scale based upon Worden et al. (2012)

Fig. 1B

Tectonic Setting of Japan



Figs 2A and 2B for Question 2

Fig. 2A

Number of employees in the toys and games manufacturing industry

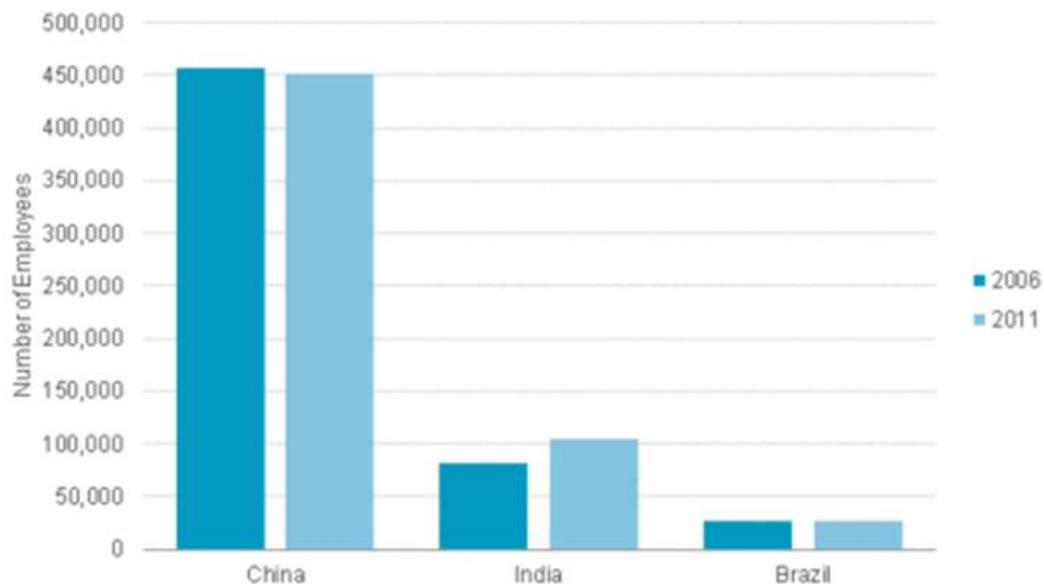
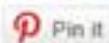


Fig. 2B

Extract from AsiaNews article on China's tainted toys

China makes 80 per cent of the world's toys, but it has come under attack for its poor safety record (toxic materials and unsafe working conditions). Even standards body has been criticised for corruption. Exports drop.



Beijing (AsiaNews/Agencies) – Rampant corruption is undermining safety standards in mainland China's toy factories, which meet 80 per cent of global demand but that could be slapped with an embargo. According to the *South China Morning Post*, Chinese toy manufacturers blame quality control auditors employed to enforce standards for receiving bribes in order to turn a blind eye to the increasingly stringent safety standards demanded by foreign retailers.

Corruption between manufacturers and auditors is so bad that the International Council of Toy Industries' Care Foundation (ICTI)—a worldwide industry programme to promote ethical manufacturing—has sacked about 20 of the 145 mainland auditors so far this year, or 14 per cent of the total.

Photographs 3A, 3B and 3C for Question 3 Either

Photograph 3A

Kissimmee River of Florida in the 1980s



Photograph 3B

Kissimmee River after mitigation efforts in 2001



Photograph 3C



Table 1 for Question 3 Or

ICT Development Index for selected countries

ICT Development Index (IDI), 2011 and 2012

Economy	Rank 2012	IDI 2012	Rank 2011	IDI 2011
Korea (Rep.)	1	8.57	1	8.51
Sweden	2	8.45	2	8.41
Iceland	3	8.36	4	8.12
Denmark	4	8.35	3	8.18
Finland	5	8.24	5	7.99
Norway	6	8.13	6	7.97
Netherlands	7	8.00	7	7.85
United Kingdom	8	7.98	11	7.63
Luxembourg	9	7.93	9	7.76
Hong Kong, China	10	7.92	10	7.66
Australia	11	7.90	15	7.54
Japan	12	7.82	8	7.77
Switzerland	13	7.78	12	7.62
Macao, China	14	7.65	13	7.57
Singapore	15	7.65	14	7.55
New Zealand	16	7.64	18	7.31
United States	17	7.53	16	7.35
France	18	7.53	19	7.26
Germany	19	7.46	17	7.33
Canada	20	7.38	20	7.14

Photographs 4A and 4B and Fig. 4 for Question 4 Either

Photograph 4A

Flood waters inundate a village in Xuancheng, in East China's Anhu province, on July 7 2016



Photograph 4B

Workers repairing a damaged road hit by heavy rainstorms in Fangshan District in Beijing



Fig. 4

Article describing the severity of the 2016 floods in China

June and July saw several days of heavy rain and flooding in southern and eastern China. Some areas have recorded over 200 mm of rain in 24 hours.

Since 30 June, several daily rainfall records have been broken, including in Macheng (285 mm), Jingmen (273 mm), Jiangxia (263 mm), Zhongxiang (230 mm), Huangpi (227 mm), all in Hubei Province, and Chaohu (293 mm) in Anhui Province, according to a statement by MCA.

Chinese Meteorological Administration (CMA) says that levels of Poyang Lake, Jiangxi Province, which is the largest freshwater lake in China, are now above warning levels and Jiujiang City has initiated a Level IV emergency response.

Table 2 for Question 4 Or

Performance of metropolitans in relation to GDP and Employment

Rank on Economic Performance 2013-2014	Metro	Country	Development Status	GDP Per Capita Change 2013-14	Employment Change 2013-2014	Rank Economic Performance 2009-14	Recession Status	Population	GDP	GDP per Capita
5	Dubai	UAE	Developed	4.5%	4.7%	172	Partially recovered	3.3 million	\$82 billion	\$24,866
25	Riyadh	Saudi Arabia	Developed	1.9%	3.9%	79	Recovered	7.3 million	\$164 billion	\$22,139
35	Jeddah-Mecca	Saudi Arabia	Developed	2.4%	3.4%	153	Recovered	7.5 million	\$161 billion	\$21,542
78	Alexandria	Egypt	Developing	0.9%	3.0%	170	Recovered	4.6 million	\$32 billion	\$7,100
82	Cairo	Egypt	Developing	0.7%	3.0%	41	Partially Recovered	13.1 million	\$102 billion	\$7,800
97	Kuwait	Kuwait	Developed	0.6%	2.7%	77	Recovered	3 million	\$166 billion	\$55,171
107	Casablanca	Morocco	Developing	1.9%	2.1%	146	Recovered	4.1 million	\$38 billion	\$9,274
137	Abu Dhabi	UAE	Developed	0.3%	2.1%	78	Partially Recovered	2.9 million	\$178 billion	\$61,009