



# ANGLO-CHINESE JUNIOR COLLEGE

## JC 2 Preliminary Examinations 2018

### GEOGRAPHY

### Paper 1

**8813/01**  
**Higher 1**

**Time: 3 hours**

**24 August 2018**  
**(Friday)**

#### **READ THESE INSTRUCTIONS FIRST**

Write your Centre number, index number and name on all the work you hand in.

Start every question on a fresh piece of writing paper

Write in dark blue or black pen.

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

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

The Insert contains all Resources referred to in the questions.

Answer **four** questions.

**Section A** – Answer Question 1.

**Section B** – Answer Question 2.

**Section C** – Answer **two** questions, each from a different theme.

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 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.

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

On the **cover sheet** provided, include:

- Your name and index no.
- The question numbers of the question you have attempted in the boxes provided, and place the cover sheet as the top page over your answers to Section A.

Start each question on a fresh piece of paper. At the end of the examination, **fasten your answers to each question separately**; with the cover page fastened as the top page for Section A.

**This Question Paper consists of 4 printed pages, including this cover page.**

**The Insert consists of 8 printed pages.**



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## Section A

### Theme 3: Geographical Investigation

- 1 A group of twenty 17 year-old students from Clementi, a residential neighbourhood in Singapore (a DC city) wanted to explore whether their neighbourhood is considered a 'healthy one'.

A 'healthy city' is an element of urban liveability. According to the World Health Organization (WHO), a 'healthy city' as one that improves its physical and social environments in order for its residents to perform all the functions of life and develop to their maximum potential. It includes promoting walking and cycling for short-distance travel, encouraging green practices within the city and its residents and creating a more inclusive community.

The students' key research question was "Does neighbourhood design that encourages physical activities play a crucial role in supporting healthy communities?" To explore this, they embarked upon a survey various locations within one residential neighbourhood in Clementi. These urban design features were found to have promoted healthy living in several Australian neighbourhoods based on their secondary research.

Resource 1 shows the list of selected urban design features researched upon and Resource 2 is a sample of the recording sheet the students used while Resource 3 shows selected results of their investigation.

- (a) Using Resource 1, suggest how these urban design features enhances liveability of an urban neighbourhood. [6]
- (b) Using evidence from Resource 1, describe **three** potential risks associated with undertaking this fieldwork and explain how each risk can be minimised. [6]
- (c) Using Resources 1 and 2, evaluate how the students conducted this investigation and explain how it could be improved to better understand the 'health' of the neighbourhood. [8]
- (d) Explain how the data in Resource 3 can be better represented. [5]

[Turn over

## Section B

### Theme 1: Climate Change and Flooding

#### Climate and Climate Change in Southeast Asia

- 2 Resource 4 shows the climograph of Vientiane, Laos.  
Resource 5 shows the Mekong river basin, its mean daily discharge and the changes to Mekong's river regime after dam construction.  
Resource 6 shows precipitation anomalies over Southeast Asia during El Nino and La Nina occurrences between June – October.  
Resource 7 show climate change impacts on different atmospheric and geomorphic processes, and the pattern of climate change vulnerability in Southeast Asia.
- (a) Explain the rainfall pattern of Vientiane as shown in Resource 4. [5]
- (b) With the help of Resources 4 and 5, account for nature of Mekong's river regime before and after dam construction as shown in Resource 5. [4]
- (c) With the aid of Resource 6, explain the changes to atmospheric and oceanic processes during El Nino and La Nina, and suggest how these warm and cold ENSO events may impact the river discharge of the Mekong Basin shown in Resource 5. [6]
- (d) Describe the pattern of climate change vulnerability as shown in Resource 7. [2]
- (e) With reference to Resource 7 and your own knowledge, suggest reasons for the patterns of climate change vulnerability shown in Resource 7. [8]

[Turn Over

## Section C

Answer **two** questions from this section.

**Either** Question 3 **or** Question 4 and **Either** Question 5 **or** Question 6.

### Theme 1: Climate Change and Flooding

- 3 (a) Explain the evidence that support climate change since the last ice age. [9]
- (b) How far do you agree that the use of alternative energy sources is the most effective strategy in managing the problem of climate change? [16]
- 4 (a) Explain the hydrological cycles of the humid and arid tropical drainage basins. [9]
- (b) 'Hard engineering strategies are most effective in managing the problem of flooding.' Assess the validity of this statement. [16]

### Theme 2: Urban Change

- 5 (a) Explain why ecological footprints may vary for cities in countries at low levels of development. [9]
- (b) Discuss the sustainability of strategies in the effective management of non-hazardous solid waste in cities. [16]
- 6 (a) Explain the challenges in measuring urban liveability in countries at high levels of development. [9]
- (b) 'Reducing the urban population is the best solution to lessen crowding **OR** fear in urban areas.'
- With reference to **EITHER** crowding **OR** fear, how far do you agree with the above statement? [16]

[End



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**Resource 1 for Question 1**

**Urban design features (in no particular order) found to have promoted healthy living within Australian cities that were researched upon by students**

- 1. Mixed land uses**
- 2. Dedicated pedestrian infrastructure; e.g. walkways**
- 3. Cycling infrastructure; e.g. bike lanes, bike boulevards for bike parking**
- 4. Public parks and other green spaces**
- 5. Public plazas and community facilities**
- 6. Presence of key nodes of public transport (e.g. bus interchanges, train stops)**

**[Turn Over**

## Resource 2 for Question 1

### Recording sheet

Researcher: \_\_\_\_\_

Date: \_\_\_\_\_

Location: \_\_\_\_\_

Time (start): \_\_\_\_\_

Time (end): \_\_\_\_\_

	Observation	Observed? Yes/No	If yes, details
<b><i>Promoting walking within the neighborhood</i></b>			
<b>1.</b>	Presence of dedicated pedestrian walkways from blocks to central shopping area		- Width? - Without obstructions? - Sheltered?
<b>2.</b>	Presence of dedicated pedestrian walkways from blocks to other recreational facilities		- Width? - Without obstructions? - Sheltered?
<b>3.</b>	Presence of dedicated pedestrian walkways from blocks to public transportation (to pre-identified bus stops)		- Width? - Without obstructions? - Sheltered?
<b>4.</b>	Presence of dedicated pedestrian walkways from blocks to public transportation (to train station)		- Width? - Without obstructions? - Sheltered?
<b><i>Promoting cycling within the neighborhood</i></b>			
<b>5.</b>	Presence of dedicated cycling paths from blocks to central shopping area		- Width? - Without obstructions? - Sheltered?
<b>6.</b>	Presence of dedicated pedestrian walkways from blocks to other recreational facilities		- Width? - Without obstructions? - Sheltered?
<b>7.</b>	Presence of dedicated pedestrian walkways from blocks to public transportation (to pre-identified bus stops)		- Width? - Without obstructions? - Sheltered?
<b>8.</b>	Presence of dedicated pedestrian walkways from blocks to public transportation (to train station)		- Width? - Without obstructions? - Sheltered?
<b>9.</b>	Presence of dedicated cycling infrastructure (e.g. parking areas)		- What type of infrastructure?

**[Turn Over**

Resource 3 for Question 1

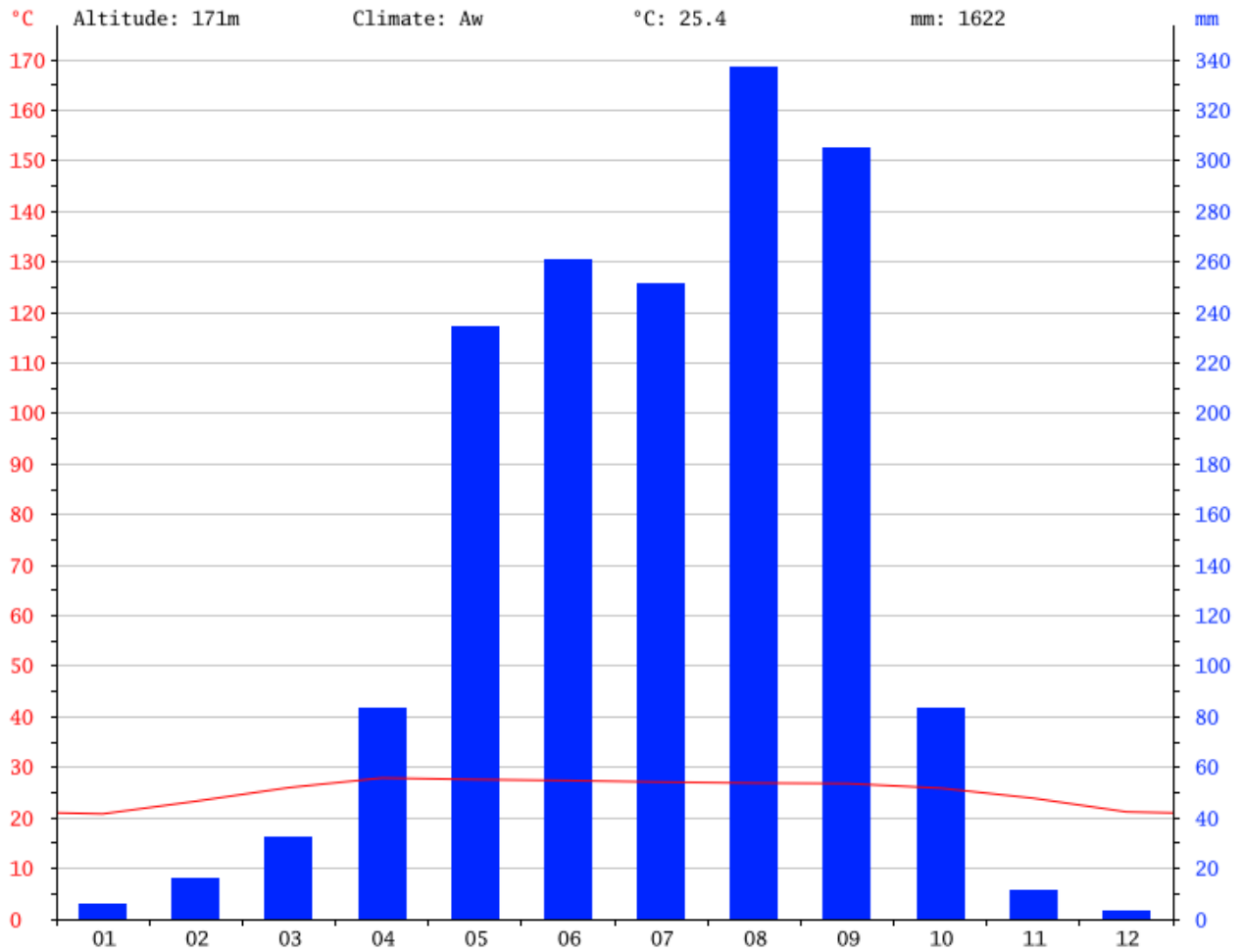
Selected results

Location	A	B	C	D	E	F	G
<b>Presence of dedicated pedestrian walkways</b>							
From blocks to central shopping area	YES	NO	YES	YES	NO	NO	NO
From blocks to other recreational facilities	NO	NO	NO	YES	YES	YES	YES
From blocks to public transportation (to pre-identified bus stops)	NO	YES	YES	YES	YES	NO	NO
From blocks to public transportation (to train station)	NO	NO	YES	YES	NO	NO	YES

[Turn Over



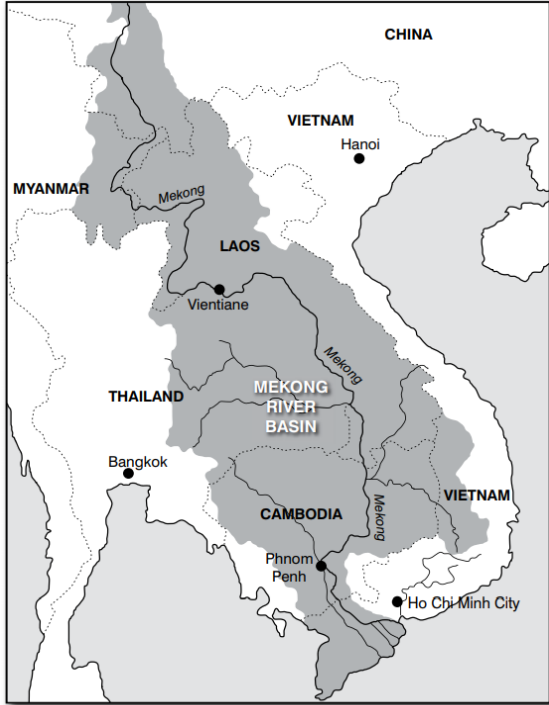
Resource 4 for Question 2  
Climograph of Vientiane, Laos



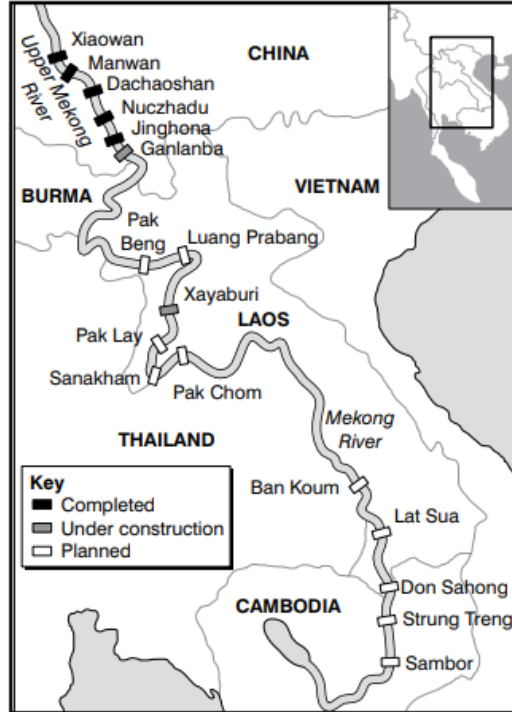
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Resource 5 for Question 2

Mekong river basin and the dams on the Mekong River

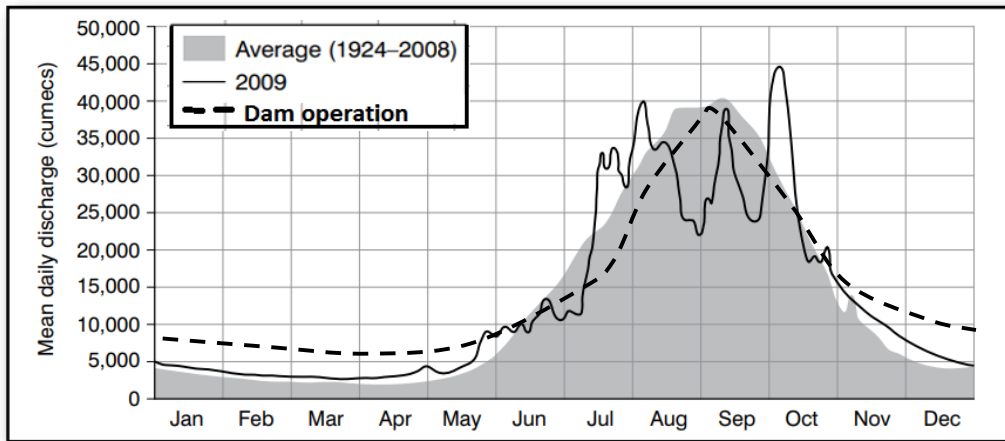


Source: Mekong River Commission



Source: International Rivers and others

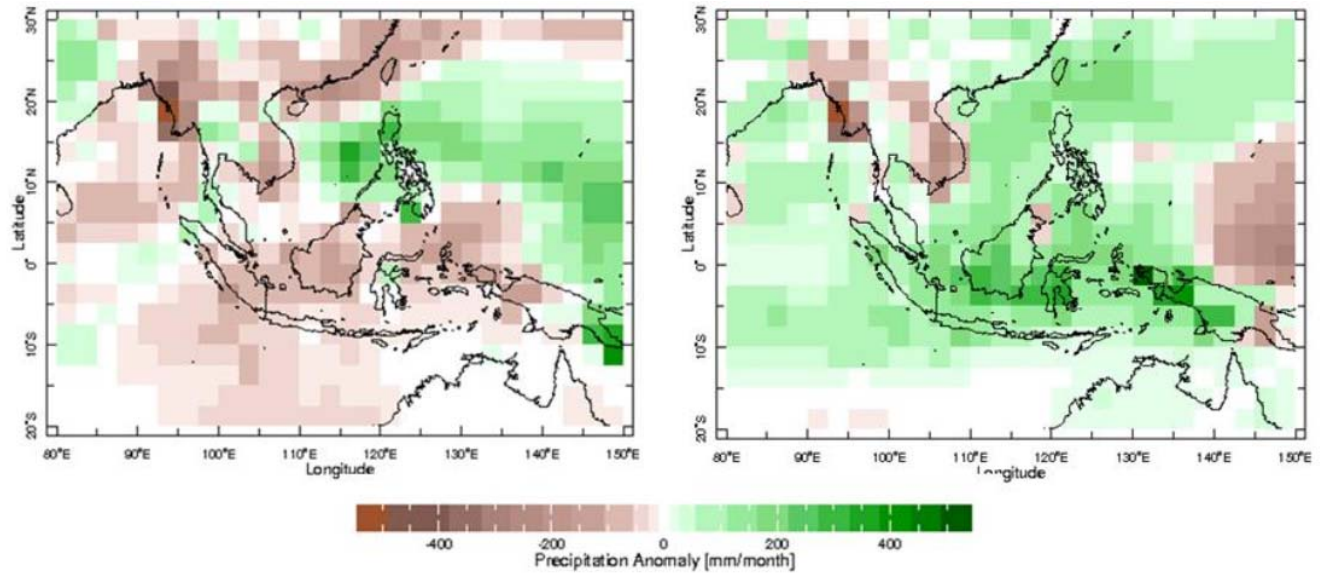
Mean daily discharge of Mekong River measured at Kratie, Cambodia



[Turn Over

Resource 6 for Question 2

**Distribution of precipitation anomalies over Southeast Asia (Jun – Oct) for El Niño (left) and La Niña (right)**



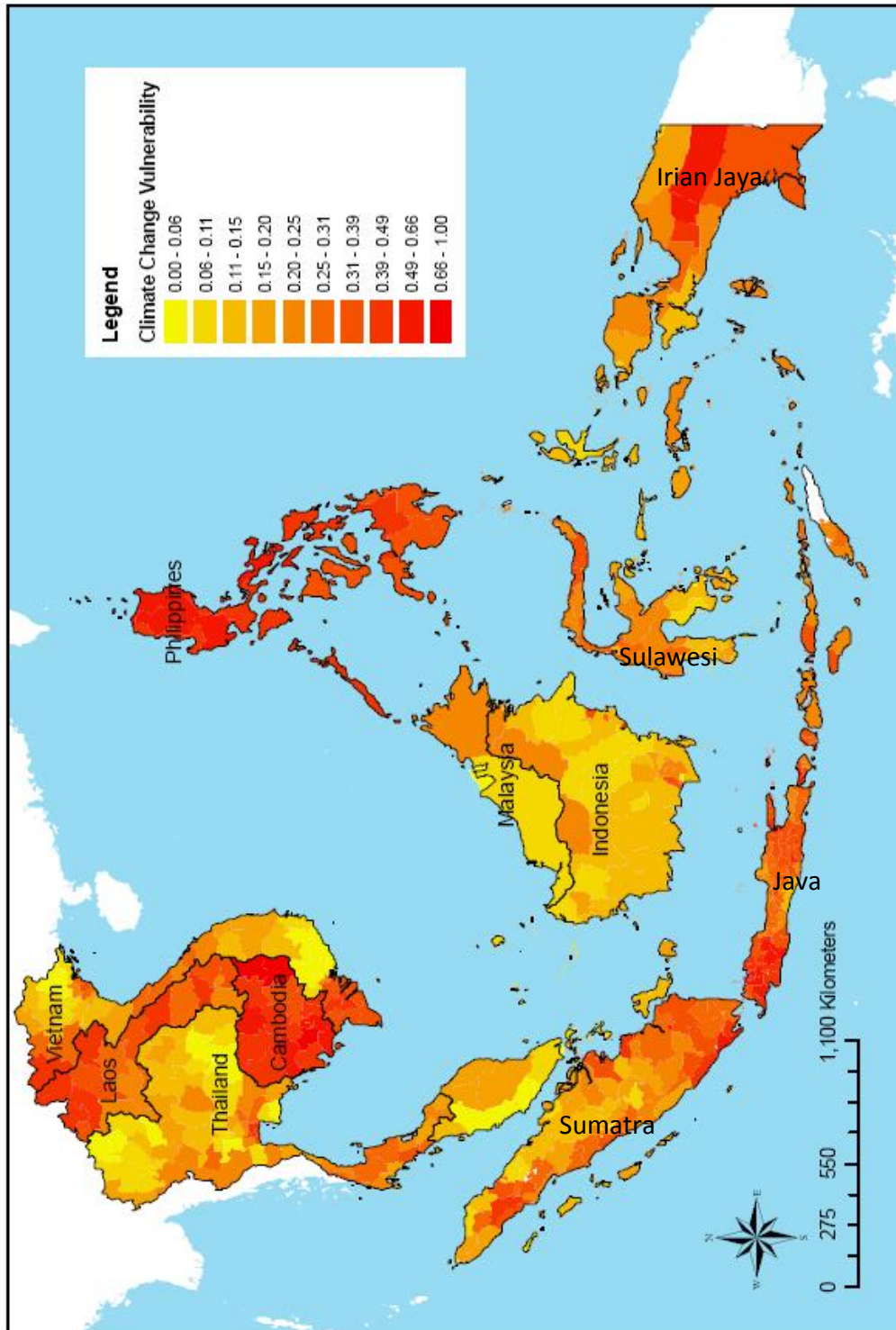
The image above shows the precipitation anomalies averaged over the El Niño and La Niña years. For instance, the impact of El Niño is typically stronger over the southern and eastern part of South East Asia during the months of Jun – Oct. (Image credit: IRI Climate)

Source: <http://asmc.asean.org/asmc-el-nino/>

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## Resource 7 for Question 2

### Climate Change Vulnerability in Southeast Asia



[End