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Centre number						Candidate number				
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**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GCSE**

B561/01

GEOGRAPHY B

Sustainable Decision Making (SDM) (Foundation Tier)

TUESDAY 24 JANUARY 2012: Afternoon

DURATION: 1 hour

SUITABLE FOR VISUALLY IMPAIRED CANDIDATES

Candidates answer on the Question Paper.

OCR SUPPLIED MATERIALS:

None

OTHER MATERIALS REQUIRED:

Resource Booklet (B561/01/02/RB – previously supplied)

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

- **Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.**
- **Use black ink. HB pencil may be used for graphs and diagrams only.**
- **Answer ALL the questions.**
- **Read each question carefully. Make sure you know what you have to do before starting your answer.**
- **Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.**

INFORMATION FOR CANDIDATES

- **The number of marks is given in brackets [] at the end of each question or part question.**
- **You will be awarded marks in Questions 4(b) and 5(a) for the quality of written communication of your answer.**
- **Resources 1–7 are contained in the Resource Booklet.**
- **The total number of marks for this paper is 40.**

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SECTION A: THE BACKGROUND

QUESTION 1

Use RESOURCE 1.

- (a) The storm hydrograph opposite shows a rainfall event in Drainage Basin A.
Add these labels in the correct boxes.

FALLING LIMB

RISING LIMB

[1]

- (b) What was the peak rainfall?

Circle the correct answer.

10 mm

20 mm

30 mm

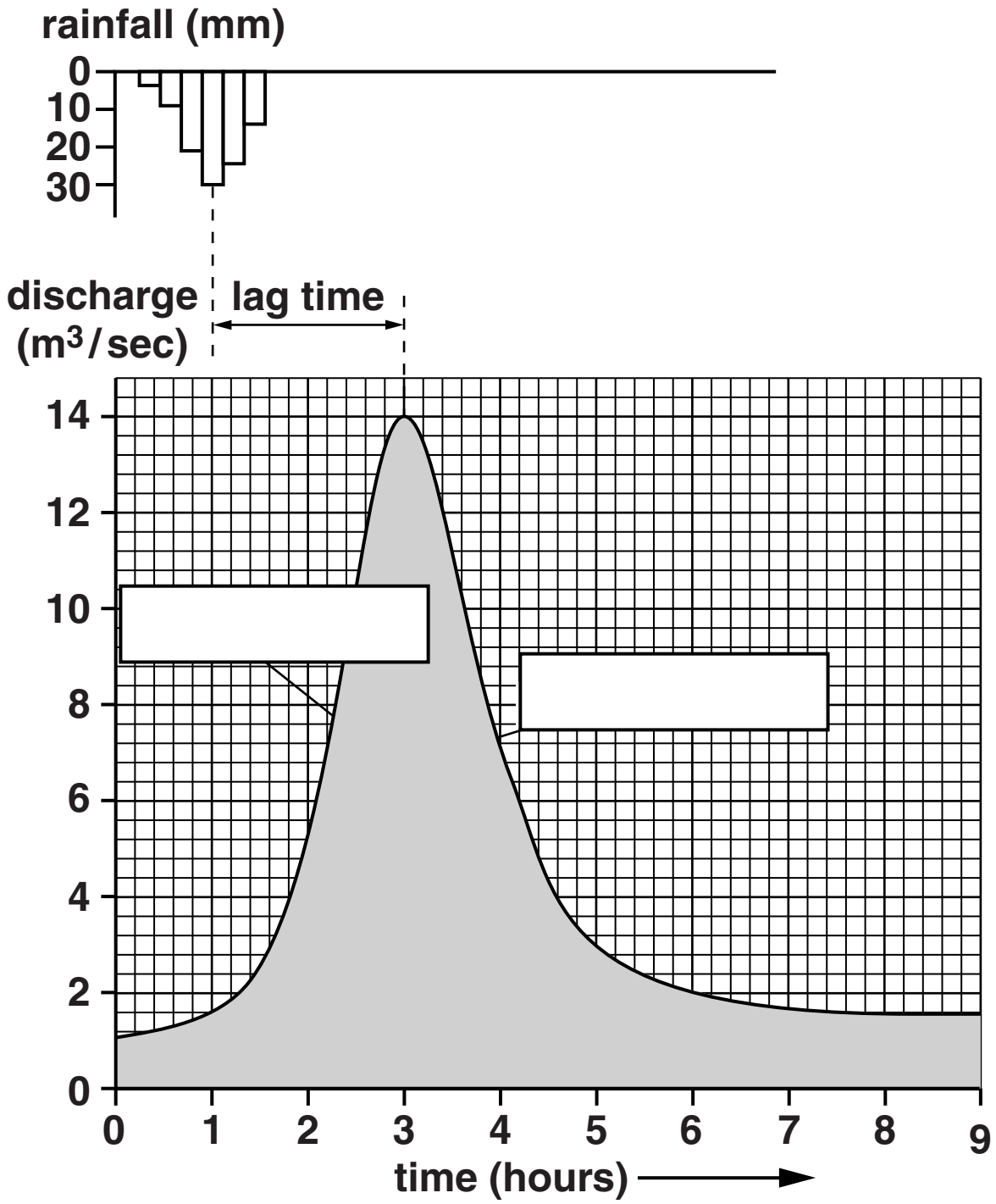
[1]

- (c) What was the lag time for this drainage basin?

_____ hours **[1]**

[Total: 3]

DRAINAGE BASIN A



QUESTION 2

Use RESOURCE 1.

- (a) Complete the table by adding the peak discharge for Drainage Basin B.

Drainage Basin	Peak Discharge (m ³ /sec)
A	14
B	_____

[1]

- (b) Study the OS maps. Tick (✓) the TWO correct statements in the table below.

STATEMENT	
Drainage Basin B has more streams than Drainage Basin A	
Both drainage basins have steep slopes	
There are waterfalls shown on the map for Drainage Basin A	
Drainage Basin B has more forest than Drainage Basin A	

[2]

(c) Complete the passage by choosing the correct words from the word box below.

Drainage Basin A has impermeable rocks, low growing _____ vegetation, _____ slopes and a _____ drainage density. This means that it is _____ likely to flood than Drainage Basin B.

Word box

LOW	TREES	MORE	GENTLE	LESS
	STEEP	HIGH	MOORLAND	

[4]

[Total: 7]

Section A: 10 marks

SECTION B: THE OPTIONS

QUESTION 3

Use RESOURCE 2.

(a) Tick (✓) ONE correct term for each statement.

Tick (✓)
below

Scientists warn that there is a higher probability of flooding in Bangladesh due to global warming.	disaster	
	hazard	
	risk	

In 2010 heavy rain caused floods that killed at least 53 people in Bangladesh.	disaster	
	hazard	
	risk	

[2]

(b) Use RESOURCE 3.

Area 2 is sometimes affected by flooding. Suggest what impacts flooding could have there.

[4]

[Total: 6]

QUESTION 4

Use RESOURCE 4.

(a) This resource describes the severity of a flood by its flood return period.

(i) On this diagram, what would be flooded by a flood with a return period of 50 years?

Circle the correct answer.

GOLF COURSE

FACTORY

SCHOOL

[1]

(ii) Using RESOURCE 4 only, suggest why the town centre is in a good location.

[1]

SECTION C: THE DECISION

QUESTION 5

Use RESOURCES 6 and 7 plus your own knowledge and any ideas from other resources in the booklet.

In January 2011 the city of Brisbane, Queensland, Australia suffered the worst flooding in over 20 years. New flood management methods are being considered to cope with any future flood problems in Brisbane. These methods will need to be sustainable.

The government is considering THREE possible options:

OPTION 1

Enforce zoning on the floodplain.

OPTION 2

Improve monitoring and warning systems.

OPTION 3

Develop a large scale scheme to improve flood management in the drainage basin.

TASKS

- (a) Choose ONE of the options on page 12. Give reasons to explain why you think this would be the best way for the government to manage the flood problem in Brisbane.
- (b) Suggest possible disadvantages of your chosen option.
- (c) Explain ONE possible advantage of EACH of the other TWO options.
- (d) Select ONE of your rejected options and suggest why it is NOT sustainable.

(a) CHOSEN OPTION – Number _____

Reasons _____

_____ [6]

(b) Disadvantages of my chosen option.

[3]

(c) Explanation of a possible advantage of each of the other TWO options.

Option Number _____

Advantage _____

Option Number _____

Advantage _____

[4]

(d) Suggestion about why ONE of my rejected options is not sustainable.

Option Number _____

Suggestion _____

_____ **[3]**

[Total: 16]

Section C: 16 marks

TOTAL MARKS FOR PAPER: 40

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