

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer all questions in Section A, and Section C.
- Answer either Question 2 or Question 3 in Section B.
- Answer the questions in the spaces provided
 - there may be more space than you need.
- Calculators may be used.
- Any calculations must show all stages of working out and a clear answer.

Information

- The total mark for this paper is 105.
- The marks for each question are shown in brackets
 - use this as a guide as to how much time to spend on each question.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶





SECTION A

Tectonic Processes and Hazards

Answer ALL questions. Write your answers in the spaces provided.

1 Study Figure 1.

This is part of an investigation into the impacts of earthquake events with over five deaths, in Sumatra, Indonesia.

Date	Magnitude (MMS)	Deaths
December 2016	6.5	104
July 2013	6.1	43
September 2011	6.7	10
October 2010	7.8	408
September 2009	7.6	1,115
September 2007	8.4	23
March 2007	6.4	68
December 2006	5.8	7
March 2005	8.6	1,314
December 2004	9.3	227,898
June 2000	7.9	103

Figure 1



(a)	(i)	Calculate the mean magnitude of these earthquakes. Give your answer to one decimal place.	(1)	
	(ii)	Calculate the median number of deaths caused by these earthquakes.	(1)	S
	(iii)	Calculate the interquartile range of deaths caused by these earthquakes. You must show your working.	(2)	



of communities to earthquake hazards.	(42)
	(12)



TOTAL FOR SECTION A = 16 MARKS

SECTION B

Landscape Systems, Processes and Change

Answer ONE question - EITHER Question 2 OR Question 3.

Indicate which question you are answering by marking a cross in the box \boxtimes . If you change your mind, put a line through the box \boxtimes and then indicate your new question with a cross \boxtimes .

If you answer Question 2 put a cross in the box \square .

Glaciated Landscapes and Change

You must use the Resource Booklet provided.

2	Study Figure 2a in the Resource Booklet.	
	(a) Explain the contribution of glacial processes to the development of these landforms.	
	iundionnis.	(6)
••••		



) Explain how glacial deposition contributes to the development of this landscape.	(6)



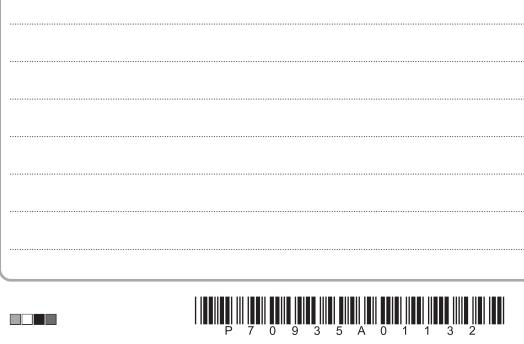
(c) Explain the role of glacial and periglacial landscape water cycle.	es in the maintenance of the	
water cycle.	(8))



)

relict glaciated landscapes.	
· J · · · · · · · · · · · · · · · · · · ·	(20)





$\langle \times \times \rangle$	
$\sim\sim$	$\times \times$
$\times\!\!\times\!\!\!>$	$\propto \propto$
$\times \times$	$\triangle \triangle X$
$\propto \times$	$\times \times \times$
ΧĊ	3≪
$\otimes \mathbb{C}$	>
XX	
$\times \times$	$\triangle XX$
$\vee \vee$	
	$\mapsto \times$
×¢	2 × ×
××	
$\propto \times$	$\times \times \times$
\propto	$\times\!$
$\sim \sim$	\times
XÈ	$+ \times$
XX	
	$\times \times \times$
	\mathbb{Z}^{\times}
$\times \times$	• ·
XX	₹(\(()
	$\cong \times$
$\!$	$\times \times \mathbb{K}$
$^{\sim}$	$\times\!\!\times\!\!\!$
×'n	
XIII	
	\cong
Ç	
	\sim
82 9	
$\times\!\!\!\times\!$	1
ΧĖ	
$\propto \times$	<u> 2</u> XX
	$r \times x$
\times	w/X
\times	
XX	
×Ū	
X	$\times\!\!\times\!\!\times$
$\triangle \hat{a}^2$	$\times \times \times$
XX	
83	m××
	5 ×
∆ <i>5</i> 2	2 XX
×.	
\times	OXX.
	\sim
$\sim \sim$	$\times\!\!\times\!\!\!\times$
$\times\!\!\times\!\!\!>$	$\propto \sim$
$\times\!\!\times\!\!\!>$	
$\times\!\!\times\!\!\times$	$\triangle \triangle \triangle$
$\!$	$\times\!\!\times\!\!\times$
$\sim \sim$	$\times \times \times$
$\times\!\!\times\!\!\!>$	$\vee \times $
$\times\!\!\times\!\!\!>$	
$\times \times$	
$\propto \!\! \times$	$\times\!\!\times\!\!\times$
$\propto \sim$	$\times\!\!\times\!\!\!\times$
	$\times \times$
$\wedge \wedge /$	
\bowtie	\bowtie
\bowtie	
$\overset{\circ}{\otimes}$	
**	
r	7
t	2
Ç	2
Ç	2
\times	⋘
\times	⋘
\times	⋘
2	2 2 3
2	2 2 3
	2 2 3
0.110	
0.110	
CINCL	
O MODELL	
O MODELL	
O MODELL	
NAME AND A	
O MODELL	
THAT LONE	
CONTRACTOR C	
CONTRACTOR C	
CONTRACTOR C	
TATION AND A	
CONTRACTOR C	
TATION AND A	
CHOIL AND TONIO	
TATION AND A	
CHOIL AND TONIO	
O MOT WRITE IN TH	
O INC. VERTICAL IN LEG	ONOT MUDITE IN THE
O INC. VERTICAL IN LEG	ONOT MUDITE IN THE
O MOT WRITE IN TH	ONOT MUDITE IN THE
O NOT WRITE IN THIS	O MOT WOUTE IN THIS
O NOT WRITE IN THIS	O MOT WOUTE IN THIS
O MOT MINISTER HOW TOWN	O NIGHT STEELS A
O MOT MINISTER HOW TOWN	O NIGHT STEELS A
O MOT MINISTER HOW TOWN	O NIGHT STEELS A
O NOT WRITE IN THIS AR	ON OTHER IN THE AD
J NOT WRITE IN THIS ARE	O MOT WINTE IN THIS ADD
J NOT WRITE IN THIS ARE	O MOT WINTE IN THIS ADD
J NOT WRITE IN THIS ARE	O MOT WINTE IN THIS ADD
J NOT WRITE IN THIS ARE	O MOT WINTE IN THIS ADD
O NOT WRITE IN THIS AR	O MOT WINTE IN THIS ADD
J NOT WRITE IN THIS ARE	O MOT WINTE IN THIS ADD
J NOT WRITE IN THIS ARE	O MOT WINTE IN THIS ADD
J NOT WRITE IN THIS ARE	O MOT WINTE IN THIS ADD

				į			
S	2	ς	ã	S	ü	Š	
	ζ	۶	ð	2	Š	á	
	8	ζ	Š	2	į	į	
	ζ	5	Š		Ž		
	3	>	3				
	3	5	3				֡
	3	2	3				
	3	3	3				
	3						
	3	3					
	3	2	3				
		3					
	3						
		3					
		\ \ \	3				
	3						
			\$ \$ \$ \$ \$ \$ \$ \$ \$				
			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				
			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				
			\$\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				
			\$\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				
			\$\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				
			\$\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				
			\$\$\\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
			\$\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				

G		ú		
л	К		7	
A		è		,
	$\leq$	=	2	
a	P	7	₹	
м	K	5	/4	
	9	Ņ	9	
'n	ú	'n	×	í
	2	ä	И	7
а			ä	î
	Z	Ξ	2	
a	Р		3	
Я	ĸ		S	
4	7	۹	÷	S
Ζ,	$\leq$	۷	$\sim$	
3	-	7	-	
			>	ζ
	١.	Z	S	á
ď			7	7
	2			
ì		į	Σ	
/			7	•
ø			P	
2	ú		Ľ.	
S	7	S	7	
ø	7	۰	7	ę
ď	,	۹	,	
	/		7	۲
1				
SI	Ρ	4	ν	
			1	
2	_	2	4	_
♂	7	₹	7	۹
А	ч	μ		
7	4		е	
a		ĕ	۰	ø
			۲.	
ø	>	ņ	۰	
				9
М	=		μ	ı
э	۰	ø	۰	ı
¥	Ì	'n	×	'n
4	2		$\mathbb{Z}$	
а	ľ.	2	r	
Q.		ø	2	٩
			7	
ì	6	ù		
	7	r		
à			ч	7
3	_	<u>_</u>	4	
♂	7		12	
à	Ŕ	И	ú	ø
S	2	≤	Z	3
4	В		ď	
Л	ĸ.	ı		ø
4	ĸ	'n	2	
	d			
à	ø	ø	₹	




(Total for Question 2 = 40 marks)

## Do not answer Question 3 if you have answered Question 2.

## If you answer Question 3 put a cross in the box $\ oxdiv$ .

## **Coastal Landscapes and Change**

You must use the Resource Booklet provided.

3	Stuc	dy Figure 3a in the Resource Booklet.	
	(a) E	Explain the contribution of marine processes in the development of these landforms.	
			(6)
•••••			
•••••			



) Explain how subaerial	processes contrib	oute to the develo	pment of this lands	(6)



<ul><li>(c) Explain the role of sea level change in the formation of both emergent and submergent coastlines.</li></ul>				
				(8)



(d) Evaluate the view that global warming is the greatest threat to coastlines and their communities.	
	(20)





$\langle \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$		XX	
$\otimes$	$\bowtie$	$\otimes$	
$\langle \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$	$\times\!\!\times\!\!\times$	$\times\!\!\times$	
8	$\Leftrightarrow$	$\otimes$	
Č.	$\infty$	$\approx$	
×		$\Leftrightarrow >$	
$\otimes$		$\bowtie$	
$\otimes$		$\Leftrightarrow \Leftrightarrow$	
	$\Leftrightarrow >$	$\times\!\!\times$	
$\otimes$	$\times\!\!\times\!\!\times$	$\Leftrightarrow$	
$\otimes$		$\otimes$	
$\approx$		$\times\!\!\times$	
Ø.		$\Diamond\Diamond$	
×	$\otimes$	×	
$\otimes$	Z		
$\otimes$		$\otimes \otimes$	
$\otimes$	(0)	$\bowtie$	
$\otimes$	$\cong$	$\otimes \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$	
X	$\otimes$	$\otimes \otimes$	
$\otimes$		$\times$	
$\otimes$	X 200	$^{\circ\circ}$	
×	20	$\bowtie$	
$\approx$	-	XX	
$\otimes$		$\bowtie$	
$\otimes$		$\times \times$	
$\otimes$	$\infty$	$\times$	
X	44	$\otimes$	
$\otimes$		$\approx$	
×	×	$\times$	
×		X	
$\approx$	20		
X	**	$\otimes \otimes$	
$\otimes$	W	$\otimes$	
$\otimes$	$\times$	$\times$	
$\otimes$	D	$\otimes$	
$\otimes$	5	XX	
×			
$\otimes$	Ó	X	
82		$\bowtie$	
$\otimes$		众	
×		88	
$\otimes$		$\times\!\!\times$	
$\otimes$		$\times\!\!\times$	
$\otimes$		$\times\!\!\times$	
SX	$\times\!\!\times\!\!\times$	$\Leftrightarrow >$	
$\otimes$	$\otimes$	×	
×	$\times\!\!\times\!\!\times$	$\approx$	
X		$\otimes \otimes$	
$\otimes$	$\times\!\!\times$	$\times\!\!\times$	
$\langle \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$	$\times$	$\Leftrightarrow$	
×	$\bowtie$	$\times\!\!\times$	
$\otimes$		$\times\!\!\times$	
×	$\times\!\!\times\!\!\times$	$\otimes$	
X	$\otimes \! \times$	$\times\!\!\times$	
$\otimes$	$\times\!\!\times$	$\sim$	
$\otimes$	$\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!$	×	
82	$\times\!\!\times\!\!\times$	$\otimes$	
$\otimes$		$\bowtie$	
$\otimes$	$\times$	$\times\!\!\times$	
X		$\bowtie$	
$\overset{\times}{\otimes}$	$\propto \sim$	$\times\!\!\times$	
$\times$			
S		$\times$	
×	a		
$\otimes$	Ö		
$\overset{\times}{\times}$			
*			
*			
*			
*	NOT WISH		
*	MANNETON		
*			
*	HAMMETON		
	CRITICAL N		
	CRITICAL N		
	VRITE IN TH		
	VRITE IN TH		
	WRITE NAME OF A R.D.		
	WRITE NAME OF A R.D.		
	WRITE NAME OF A R.D.		
	WRITE NAME OF A R.D.		
	WRITE NAME OF A R.D.		
	WRITE NAME OF A R.D.		
	WRITE NAME OF A R.D.		
	WRITE NAME OF A R.D.		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		
	VELTE IN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA DO NO		
	VEITHEN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA DO NOT W		
	VRITE IN THIS AREA DO NOT W		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		
	VRITE IN THIS AREA		




	(Total for Question 3 = 40 marks)
TO	TAL FOR SECTION B = 40 MARKS

### **SECTION C**

## **Physical Systems and Sustainability**

Answer ALL questions. Write your answers in the spaces provided.

You must use the Resource Booklet provided.

(a) Suggest <b>one</b> reason for the differences in the growth of electricity generated from solar power.	
solar power.	(3)



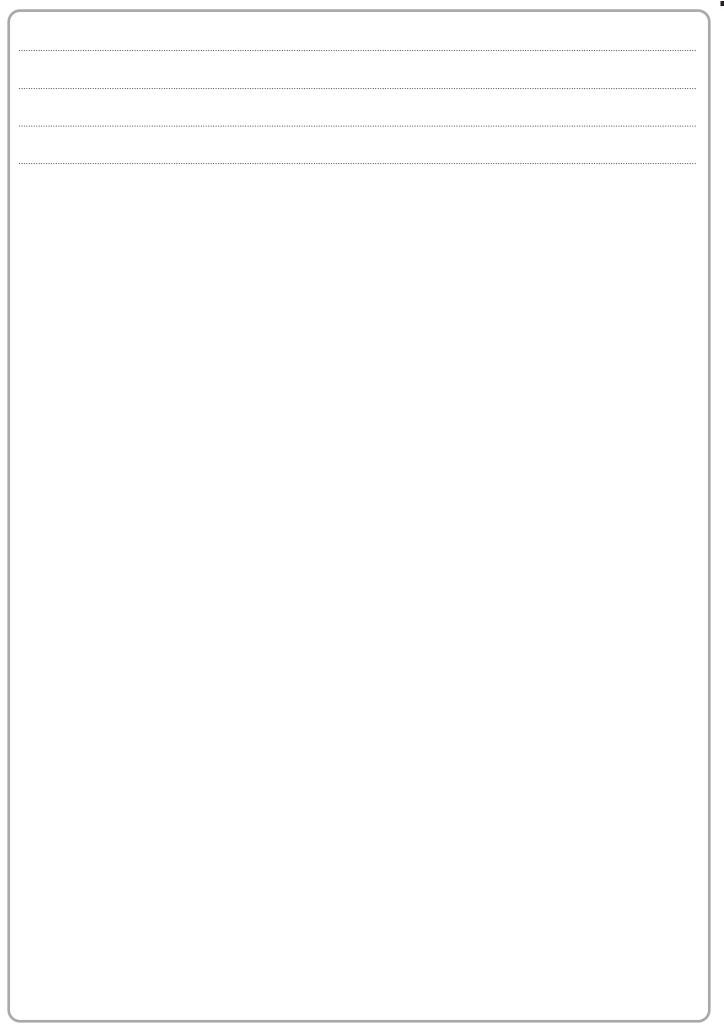


(b) Explain how oceans regulate the composition of the atmosphere.	(6)



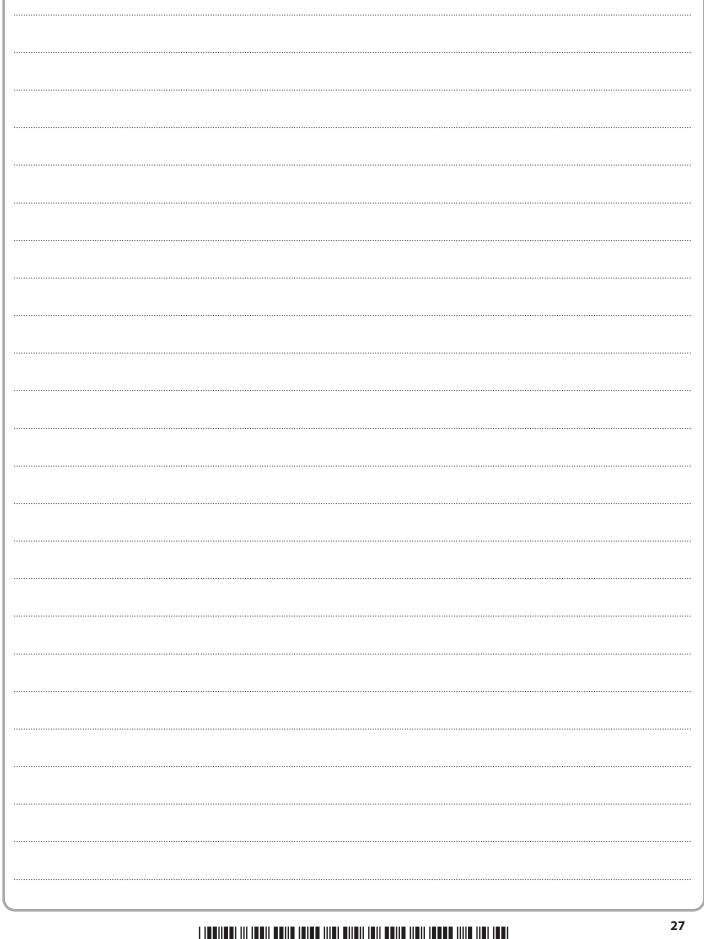
(c) Explain the contribution of human activity to the risk of drought.	(8)





(d) Assess how successful different countries have been in achieving energy security. (12)		







(e) Evaluate the view that land use changes are the ma of river flooding.	in cause of the increasing lisk
	(20)








(Total for Question 4 = 49 marks)
TOTAL FOR DADED - 105 MARKS

**BLANK PAGE** 



# **Pearson Edexcel Level 3 GCE**

Time 2 hours 15 minutes

Paper reference

9GE0/01

# Geography

Advanced PAPER 1

## **Resource Booklet**

Do not return this Booklet with the question paper.

Turn over ▶





### **SECTION B**

The following resources relate to Question 2.

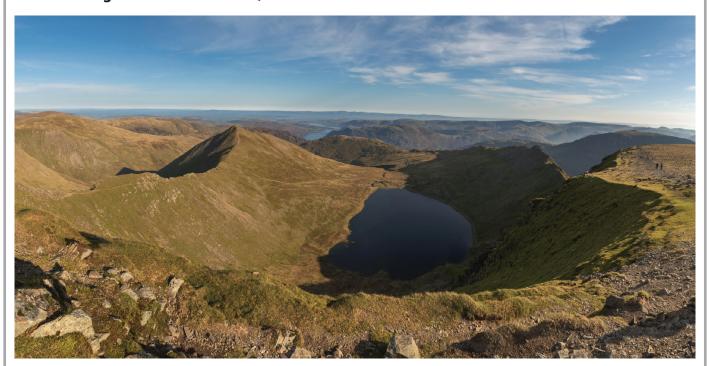


Figure 2a

Distinctive glacial landforms in an upland relict landscape

**2** P70935A





Figure 2b

An active glacial landscape in Iceland

## The following resources relate to Question 3.



Figure 3a

Distinctive landforms in a coastal plain landscape

**4** P70935A





Figure 3b

A coastal landscape in Dorset

#### **SECTION C**

The following resource relates to Question 4a.

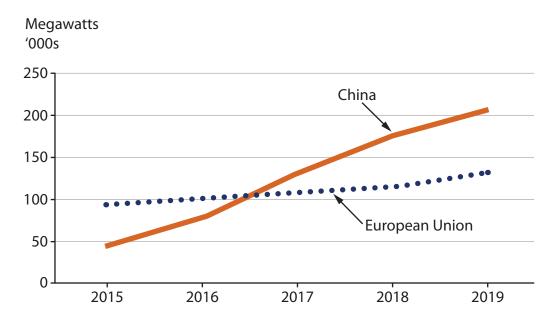


Figure 4

Electricity generation (in megawatts) from solar power in two contrasting places



