MARK SCHEME for the May/June 2011 question paper

for the guidance of teachers

0460 GEOGRAPHY

0460/41

Paper 4 (Alternative to Coursework), maximum raw mark 60

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

• Cambridge will not enter into discussions or correspondence in connection with these mark schemes.

Cambridge is publishing the mark schemes for the May/June 2011 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

Page	2	Mark Scheme: Teachers' version	Syllabus 0460	Paper		
		IGCSE – May/June 2011 0		41		
1 (a) (i	、	angers such as: kin irritation wallowing polluted / poisonous water Vater gets in eyes tats in the water ifection in open wound umes chemicals in water visease / bacteria / filth in water roken glass / physical objects lgae recautions such as: cloves / waterproof clothing / protective clothing lasks coggles Vellingtons / waders / boots ion't drink water Vash hands when completed work				
		lust be dangers of pollution not just river		[2 + 2]	[4]	
(ii	, D D S	mell oam / debris / material in river viscolouration / colour ead fish / animals ample water / test pH contact government body / local authority responsible fo	or river	[2 @ 1]	[2]	
(b) (i	d A d C	lost visible pollutants in the river nearest to the ecreases downstream – accept distances or sites mmonia level high after / near factory / ammoni ownstream – accept distances or sites oxygen level drops / low after / near factory / c ownstream – accept distances or sites	a level decrease	es further	[2]	
(ii	Â R	mmonia / pollution is high as waste water from factory mmonia / pollution decreases downstream as it mixes liver current helps to disperse / spread pollution lore water / tributaries dilute pollution	-	lves	[2]	
(c) (i		o move the animals into water / disturb animals / nimals	to find / to catch	n / collect	[1]	
(ii	•	let should be downstream (if upstream allow correct ex o that animals float into net/ flow with water / water flow	. ,		[2]	
(iii	-	o get a Biotic Index score for each animal / to see I nem about quality of water	now polluted wat	er is / tell	[1]	
(iv	́Т Т	o find the part of the bed where most animals live o get an average Biotic score for the site o make the test results more reliable / fair / accurate ompare	average / more	results to	[1]	

Page 3		Mark Scheme: Teachers' version	Syllabus	Paper	
		IGCSE – May/June 2011	0460	41	
(d) (i)		for 1 mark wer = 6 for second mark			[2
(ii)		points on Fig. 3 4 plot must use the answer from part (i)		[2 @ 1]	[2]
(iii)	Low From By s	nest average Biotic Index (B.I.) score is at site 1 / be est average / decreases B.I. score is at site 2 / at w n site 2 to site 5 B.I. score increases ite 5 B.I. is still lower than site 1 eces of data from graph = 1 max	-		[3]
	2 pic				10
(iv)	In m	npolluted water: stonefly / mayfly / caddis fly are fou ost polluted water: leech / rat-tailed maggot / bloody biotic score where water not polluted / low biotic so	worm are found ([2]
Pec Disp Nitr Fari Sev Coc Oil 1	shing ople w posal ates m ani vage oling v	clothes vashing themselves of dead bodies / fertilisers / pesticides imals drinking water / human waste water from power stations / hot water from power st boats / refineries	ations	[2 @ 1]	[2]
Velo Cro Bed Inve Mea Cre	ocity ss-se lload estiga asurir dit re	sis (1 reserve) such as: / discharge varies downstream / across a meander ection varies downstream varies downstream ation involving floats, timing, measured distance, flow ng poles, clinometer, quadrat, roundness index cording data in field nalysis to test hypothesis – e.g. best-fit line, correlat			
1 m	ark fo	or hypothesis, 3 marks for fieldwork techniques			[4]
				FT = 4 = 1	
				[Total:	30

Page 4		4 Mark Scheme: Teachers' version Syllabus		Syllabus	B Paper	
			IGCSE – May/June 2011	0460	41	
2	(a) (i)	Most Not w	ents only want to ask tourists / questionnaire is for people they approach will not be tourists vaste people's time lude non-tourists results will be unreliable / wrong i			[2]
	(ii)	More Easie To se	ain difference between physical and human attraction e specific information than just asking people to name er to classify results ee which type of attraction is more popular types of attraction / wider choice of attractions to a	ne attractions		[2]
	(iii)	Least More Touri	/ highest number tourists come from Asia t / lowest number of tourists from Africa from Asia than S America (or other 2 areas) ism is international / tourists come from around the rk for data if interpreted e.g. 1/3 from Asia	world		[2]
	(iv)	Com	pletion of bar graphs		[2 @ 1]	[2]
	(v)	1 ma	ed bar graph / pie graph / pictograph rk for appropriate graph rk for drawing, 1 mark for labelling			[3]
	(vi)	Hypo visito Overa Resu 170 v Popu Credi	gree with students othesis was true / agree with hypothesis / physica ors all 38 say physical compared with 32 say human offs are close / similar visits to physical attractions & 140 visits to human a off anomaly such a stractions – mountains, waterfall, elep it anomaly such as night bazaar was very popular h it use of paired figures for individual attractions	attractions hant camp	ight more	[4]
	(b) (i)		idea for selecting interviewees, e.g. every tenth pe vals / one person per minute	erson walking past	t / regular	[1]
	(ii)	Priori Stops To se Hard More No: M Too r	data is more manageable itising their ideas s them listing everything ee if more than one positive / negative to choose just one idea / wider choice data May have views about more than two impacts much data mation not required in hypothesis			[2]

Page 5		Mark Scheme: Teachers' version	Syllabus	Paper
		IGCSE – May/June 2011	0460	41
(c) (i)	2^{nd} c	hoice: 16 x 2 =32 choice: 10 x 1 = 10 Il score = 42		[2
	1012			L
(ii)	Plot	result of calculation in part (i) on Fig. 7B		[1
(iii)	53 t thou Ove nega	e / hypothesis is correct / tourism has positive effect hought tourism was a positive influence & 8 though ight it was positive r 80% (87) thought it was positive / less than ative / 7 times as many thought it was positive than n positive impact of tourism is jobs and income	20% (13) thoug	
		ut of 61 gave it as first choice		[4
(iv)	Mos Traf Air p	al people can see more taxis / tut-tuts t affected by these / affected daily fic congestion slows them down travelling / stops the pollution makes it difficult to breath pollution from planes / trains bringing tourists	em getting to wor	k on time [2
E.g Co	g. tally mpile	fic survey on main streets at different times of day a , 10 min period of time, 3 times per day, both sides a questionnaire / interview to ask drivers/pedestriar stions such as: Where is traffic congestion worst?	of road in pairs	
		ourney to work/school delayed?		[3
				[Total: 30
				•