MARK SCHEME for the October/November 2012 series

0460 GEOGRAPHY

0460/42

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 should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2012 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.



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1 (a) Each horizontal pairing = 1 mark. Use ticks/crosses here.

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(b)

(c)

	High pressure	Low pressure
Air is	sinking	rising
Weather conditions change	slowly	rapidly
Expected weather is	dry	wet
		[3 × 1=3]

[5 × 1-5]	
Examples: look for two points Index pointer shows previous recorded value / align both pointers(1) Arrow / pointer /needle moves on dial (1) Difference between index pointer and arrow/ pointer needle / shows change (1) Read value/pressure on dial (1) [1 + 1 =2]	
1018 (mb) [1]	
Millibars [1]	
Example To get comparable reading / consistent / fair / reliable <u>NOT accurate</u> [1]	
Examples: look for two points Cones / cups revolve / spin / turn / rotate /moves (1) Read speed off meter (1) Shows reading as km per hour (1)	
[1 + 1 = 2]	
Plot on scatter graph 13^{th} (<u>1016mb & 12 km per hr</u>) & 19^{th} (<u>1017mb & 7 km per hr</u>) for Manama. <u>1 mark per plot</u> . [1 + 1 = 2]	
Hypothesis is NOT TRUE / as AP increases wind speed does not decrease –	
	Examples: look for two points Index pointer shows previous recorded value / align both pointers(1) Arrow / pointer /needle moves on dial (1) Difference between index pointer and arrow/ pointer needle / shows change (1) Read value/pressure on dial (1) [1 + 1 = 2] 1018 (mb) [1] Millibars [1] Example [1] To get comparable reading / consistent / fair / reliable NOT accurate NOT accurate [1] Examples: look for two points [1] Cones / cups revolve / spin / turn / rotate /moves (1) Read speed off meter (1) Shows reading as km per hour (1) [1 + 1 = 2] Plot on scatter graph 13^{th} (<u>1016mb & 12 km per hr</u>) & 19^{th} (<u>1017mb & 7 km per hr</u>) for Manama. <u>1 mark per plot</u> .

<u>Accept</u> As AP increases, wind speed does slightly / positive relationship (1) <u>OR</u> No relationship between AP and wind speed (1)

Data evidence:

e.g. at 1019mb speed is 13 km/hr but at 1010mb speed is 6 km/hour (1 max) e.g. at same AP wind speeds have large extremes (1) at 1016mb there are 4 different speeds /range 3-12 km/hour (1 max) (ALSO ok if use 1012mb/1019 lines) e,g. at same wind speed AP has large extremes (1) at 4km/hr AP ranges from 1012mb to 1019mb (1 max) (ALSO ok if use 7 km/hr line) [1HA + 3 = 4]

(d) (i) <u>Primary data</u>: using a rain gauge & measuring the speed of river flow (1) <u>Secondary data</u>: researching on the internet & reading a newspaper report (1)

Mark as 1 correct = 0, 2 or 3 correct = 1, all 4 correct = 2.

[1 + 1 = 2]

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(ii) Plot	(ii) Plot 2 bars for 18 th in Manama: July= 999 mb, Jan = 1016 mb		[1 + 1 = 2]		
(iii) Hyp	(iii) Hypothesis is TRUE				
AP	AP has larger differences in Manama / lower differences in Jakarta (1)				
In M In Ja <u>Can</u>	dit data up to 3 max with reserve of 2 marks lanama AP varies between 16-23 mb between Jan akarta AP varies between 1-3 mb between Jan & Ju compare individual data on any dates on 11 th January 1018mb at Manama but 11 th July 9	Ily (1) or raw figur			
	1 th January 1012mb at Jakarta and on 11 th July 101		[1 HA + 3 = 4]		
May not Data onl These d Data col How acc Unable t Time zol	mples required. Looking for weaknesses (Can be in have carried out pilot study (1) y collected for 10 day periods (1) ays may not be typical conditions (1) lection only done twice a year (1) curate were readings /student errors (1) to check the results from other school / confidence in ne/communication/language difficulties/issues (1) have taken more than just 1 reading (1)		[1 + 1 = 2]		
Use ther Where th	<u>ich as:</u> or 1 max an acceptable hypothesis regarding temper mometer (1) nermometer is located e.g. in the shade / Stevensor of readings taken e.g. maximum, minimum temperat	n screen (1)			
	adings are made (1) dings are recorded (1)	[1	+ 1 + 1 + 1 = 4]		

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2	(a) (i)	<u>Only</u>	v two answers possible; do NOT credit examples of	type or initials.	
			ardware. rofessional service.		[1 + 1 = 2]
	(ii)	To s To g To s	<u>mples</u> implify the map / easier to read / understand / analy proup <u>similar</u> shops / services together (1) show a pattern of shops / services on the map (1) ier to carry out fieldwork (1)	rse/ can compare (1) [1 + 1 = 2]
	(iii)	Arou In th Sout Awa	<u>mples</u> und/near the market area (1) le market (1) th and east of market (1) ly from or west of the main road (1) of cemetery (1)		[1]
	(iv)	Alon To th On t Clos Clos	mples ig the main road (1) he east of the CBD (1) he edge of the central area/CBD / out of town (1) is to the bus station (1) is to petrol station (1) east of market (1)		[1]
	(v)	W & Supe Supe lorrie Sma Supe	mples G located where customers can walk to these shop ermarkets are located for travelling shoppers / acces ermarket customers may use vehicles so need space es delivering goods (1) all shops/stores can afford rent in centre (1) ermarkets need more space / where land is cheaped ermarkets away from centre as built later / no space	ss for people in ve ce for parking / for r (1)	hicles (1)
	(vi)	near	lence does SUPPORT Hypothesis 1 / it is TRUE / co r to market –	ommercial centre is	5
		High Diffe Offic	ps surround market area / on three roads (1) of density of small shops in centre (1) erent types of shops and services in centre (1) ces/professional services in centre (1)		
			ernment offices in centre (1) station in centre (1)		[1HA + 2 = 3]

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(b) (i)	Examples Results will not be affected / distorted by people going to work / children going to school /rush hour traffic (1) 10 minutes is long enough to get valid results / not too long to get bored (1) Working days will give typical pattern of movement in week rather than weekend (1) Repeating the survey on two days to get an average / check for reliability of results (1) [1 + 1 + 1 = 3]			
(ii)	= 18		& mopeds	
	<u>1 ma</u>	ark for total of 18		[1 + 1 = 2]
(c) (i)	Insic	npletion of 100 pedestrian isoline which must go: le 97 and between 110 and 93 on right (1) side 102 and between 110 and 84 on left (1)		[1 + 1 = 2]
(ii)	Sha	ding of area over 100 vehicles.		[1]
(iii)	Would separate out two groups of vehicles (1) Would show when people went to different areas on different transport (1) Would show where 2/3 wheeled vehicles went compared to 4-wheel vehicles or similar			
(iv)	Hypothesis is TRUE / pedestrian flows are highest in commercial centre / vehicle flows are lowest – <u>1 mark</u>			/ vehicle flows
		estrian flows are over 150 in commercial centre (1) icle flows are between 25 – 50 in commercial centre	e (1)	[1HA + 2 = 3]
(v)	v) NOTE 1 reserve mark for Pedestrian flow and 1 reserve mark for Vehicle flow			e flow
	<u>Exar</u>	mples:		
	Pede	<u>estrian flows</u> are highest in area of market <u>becaus</u> e	:	
	Peoj Man Like	ple walk to buy food/ household/convenience goods ple come from nearby housing areas (1) y people may not own vehicles / don't need vehicle ly to be more work in centre (1) cker to get round shops than with vehicle (1)	,	
	<u>Vehi</u>	icle flows are highest along main road <u>because</u> :		
	People travelling between other settlements/ through traffic /commuting (1) People go to supermarkets to buy in bulk (1)			(1)
	Vehicles lowest in centre because of narrow roads/lack of parking space (1)			e (1)
			I	[1R + 1R + 1 = 3]

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(d) Question is about this fieldwork investigation being done better in this town.

Ideas include: Surveys done more frequently during the day (1) Surveys done on >two working days (1) More survey points to give greater coverage (1) Comparison with survey done on a non-work day such as weekend (1) At least three people doing survey so more checking (1) Ensure each group has watch / stopwatch (1) Use of counters / 'clickers' (1) Carry out pilot study (1)

[1 + 1 + 1 = 3]

[Total: 30 marks]