

CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge Ordinary Level

MARK SCHEME for the October/November 2014 series

2217 GEOGRAPHY

2217/23

Paper 2 (Investigation and Skills), maximum raw mark 90

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Section A

- 1 (a) (i)** 460 825
459 825 [1]
- (ii)** W and E
WNW and ESE [1]
- (iii)** Flat land
No highland in line of approach
Road access
Near populated areas for access
Away from populated areas for safety / noise issues
Enough space [2]
- (b)** 7.0 – 7.6 [1]
- (c) (i)** 1086m [1]
- (ii)** Dip Tank [1]
- (iii)** Track / cut line / game trail [1]
- (iv)** Accuracy at grid lines
Indication of tributary valleys [2]
- (d)** Bush = both
Cultivation = 4779
Mining = 4279
Urban = neither [4]
- (e) (i)** B [1]
- (ii)** Wide tarred road = 50 – 55mm from left
Hut = 82 – 86mm from left
West edge of Cultivation = 17 – 20mm from left [3]
- (f)** Radial
On medium bush land
Disappear at edge of cultivated land [2]

[Max 20]

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- 2 (a) (i) 185mm/yr [1]
- (ii) Constructive [1]
- (iii) Indian Ocean
Pacific Ocean
Atlantic Ocean
West of Nazca plate / East of Pacific plate
North of Antarctic plate / South of Pacific / Indian plate
West of Indian plate / East of African plate
West of Eurasian / African plate / East of North / South American plate [3]
- (b) (i) X – converging
Y – same direction [2]
- (ii) At both X and Y [1]
- [Max 8]**
- 3 (a) (i) Correct completion of wind rose [1]
- (ii) 5 [1]
- (iii) W [1]
- (b) (i) Wind vane [1]
- (ii) A [1]
- (iii) B – too close to the hut / sheltered by hut / too low to ground
C – screen reduces air flow
D – too close to tree / sheltered by tree [3]
- [Max 8]**

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- 4 (a) Beach
Calm water
Sunny
Glass areas
Shady trees
Shallow water [2]
- (b) Hotel / apartments
Ship / boats
Pier
Jetty / breakwater
Landscaped
Walkways / paved paths
Benches
Lighting
Safe swimming area [4]
- (c) Increased noise levels
Grass worn away
Lack of privacy
Increased litter
Sprawl of more hotels
Increased prices in local shops
Water shortage [2]
- [Max 8]**
- 5 (a) (i) # shading on Fig. 7 [1]
- (ii) Scattered
Mainly in south
West / Pacific coast has 4 areas
East / Gulf of Mexico coast has 2 areas
West / Pacific coast on peninsula
Areas adjacent to 101+ areas
Area on US border
Area on Guatemala border
Coastal areas / one area not on coast [3]
- (b) (i) Correct completion of graph [1]
- (ii) Slight increase to 1965 / 70
Decrease 1970 to 1990
Most rapid decrease is 1975 to 1980 [2]
- (iii) Increased slowly [1]
- [Max 8]**

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- 6 (a) Manufacturing = 43
 Services = 51
 Construction = 6 [1]
- (b) Manufacturing decreases
 Services increases [2]
- (c) (i) Tall buildings
 Modern buildings / high proportion of glass
 Lots of shops / offices / entertainment / government buildings
 High order shops and services
 Lots of traffic / pedestrians / tourists [3]
- (ii) Factories replaced with commercial
 CBD functions expanding into surrounding area
 Small / old housing replaced with flats / luxury developments
 Roads restructured [2]

[Max 8]

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Section B

7 (a) Method 1:

Measure length of river (10 m)/divide into sections/ranging poles to mark out section/set up start and finishing points
 Put orange/dog biscuit/float/floating object into river
 Time float moving over distance
 Repeat **and** calculate average/repeat across river channel
 Calculate velocity by dividing distance by time

Method 2:

Put velocity meter/propeller/it below surface of river/in/into river/in/into the water
 Propeller must be facing upstream/nothing in front of propeller
 Read/look at digital/velocity reading/display/speed is shown on display
 Take several readings over time **and** calculate average/take readings across river channel **and** calculate average

If answers are wrong way only round credit relevant point about repeat and calculate average

Reserve 2 marks for each method

[6]

(b) (i) Floats got stuck in channel/hit objects/vegetation in channel

Operator error/error in calculation

Measurements not easy to take at different points across river/float doesn't move in straight line

Floats affected by wind

Only measures surface velocity

3 @ 1 [3]

(ii) Completion of Group A line graph at points 3 (1.1 m/s) and 4 (1.6 m/s)

Look at 2 plots and completed line

-1 for each error (wrong plot(s)/incomplete line)

[2]

(iii) Hypothesis is **true**/velocity does increase downstream – 1 mark reserve

1 mark for **average** velocity data from two sites from group B e.g. site 1 = 0.7 and site 4 = 1.7; site 2 = 0.8 and site 3 = 1.2

Overall/downstream/over the 4 sites from 0.7 to 1.7

[2]

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- (c) (i) Size: used a ruler to measure long axis/length of pebble
Roundness: used information from the chart/compared pebble with the chart [2]
- (ii) Rocks selected may not be typical of the rocks at that site/anomaly
All rocks may have been taken from same area of river bed/not across channel/taken from same place
Not a fair/reliable sample/students choose rock/bias 2 @ 1 [2]
- (iii) Plot two bars on graph: average length of long axis = 15.4 cm
average roundness score = 3.9 2 @ 1 [2]
- (iv) Average **length** of long axis at site 1 = 5.0 at site 3 = 9.7
Average length of long axis at site 1 = 5.0 at site 4 = 9.3
Accept reference to **any** 2 sites and lengths
- Average **roundness score** almost the same/similar for all sites + data from **any** 2 sites OR
Accept reference to any 2 sites and roundness scores which show decrease in roundness i.e. NOT sites 1 and 2 or sites 3 and 4 in combination
Roundness score at site 1 = 4.5 at site 4 = 4.3
Roundness score at site 2 = 4.6 at site 3 = 3.6
- 1 mark for length and 1 mark for roundness
Allow tolerance of 0.1 on all measurements from Group **A**
- No hypothesis mark 2 @ 1 [2]
- (d) (i) Eroded by water
Attrition/pebbles crash into each other/river bed/bank
Corrosion/solution/dissolves rocks
Smaller/rounder pebbles are moved further downstream because they are easier/lighter to transport [3]
- (ii) Repeat measurement(s) to check accuracy/other student measures to check accuracy
Sample/measure more pebbles at each site/take more measurements at each site
Use callipers/pebbleometer/measure weight or volume of pebbles
Systematic sampling technique/sample rocks from inside, middle and outside
Test at **more** sites 2 @ 1 [2]

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(e) Select/find more fieldwork sites downstream/along the river

Stretch measuring tape/rope across channel/from one bank to the other
Record measurement of width (in metres)

Rest rule/ruler/ranging pole on river bed/lower rock on string to river bed
Make sure ruler is upright/vertical/make sure string is taut
Measure depth at regular intervals across channel (every metre)
Read off the scale where water level reaches/where ruler is wet
Record measurement of depth (in cm/metres)

Only credit 1 mark for recording measurement

[4]

[Total: 30]

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- 8 (a) 1 mark for name of sampling method – it must link to description (or credit just name **or** description)
- Random sampling:
 Ask the next person they meet / ask any person / pick the first person / no pattern in choosing people
 Use random number table to generate an order to ask people
- Systematic sampling:
 Ask people at regular intervals / regular pattern
 Ask every tenth person they meet
- Stratified / Quota sampling:
 Ask people from different age groups / male and female / different socio-economic groups
 Get a proportionate number from each age group / gender / socio-economic group [3]
- (b) (i) Completion of pie chart – 31 to 40 = 26% and more than 40 = 10%
 1 mark for line, 1 mark for shading [2]
- (ii) Most people have lived in the village for more than 20 years [1]
- (iii) Completion of divided bar graph
 Nearby towns = 25%, local villages = 15%, always lived in village = 16%
 2 marks for dividing lines at 69 and 84 (if 69 is incorrect, add 15 for second line placement)
 1 mark for shading – must be in correct order
 –1 mark if segments are correct size but wrong order [3]
- (iv) Hypothesis is **false / incorrect / no** – 1 mark reserve
- Most / more people came from more than 10 km away / less than half came from less from than 10 km away
- 40% or 40 / 84 or 48% came from less than 10 km / 44 / 84 or 52% came from more than 10 km away
- Hypothesis conclusion is correct / true / partially true = 0 [3]
- (v) 1. Born in the village
 2. Surrounded by attractive scenery
 3. Easy access to work in the nearby town 3 @ 1 [3]
- (vi) Hypothesis is **true / correct** – 1 mark reserve
- More than half / 53% live in the village because of work
 38% work in (nearby) town **and** 15% work in the village
- Hypothesis conclusion is incorrect / not true / partially true = 0 [3]

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- (c) (i) Data collected from another source / not collected yourself / second hand data / published data / already available [1]
- (ii) Book / map / newspaper / internet / web site / data table / document such as birth records [1]
- (iii) Line / bar graph [1]
- (iv) Plot two bars
 1961–1971 = –5.4%, 2001–2011 = +34.2%
 Ignore shading 2 @ 1 [2]
- (v) Local people:
 Crime / anti-social behaviour
 Traffic congestion / lots of traffic / danger from traffic
 Rise in house prices / expensive house prices / unable to buy a house locally / not enough houses
 Traffic noise / noisy residents
 Decrease in community spirit
 Pressure on community facilities / schools / surgery etc.
- Local environment:
 Destruction of fields / vegetation / forests / farmland
 Loss of habitats / reduction in wildlife
 Air pollution
 Pollution of rivers / water pollution
 Noise scaring animals
 Litter eaten by animals 2 + 2 [4]
- (d) Get a new map
 Compare land use in 2011 / present-day village / present-day map with 1970 map
 Identify changes in building or land use / e.g. shop or post office to housing
 Plot new houses / shops / new buildings / roads on the map
 Label / classify / colour-code different types of land use or old and new buildings / overlay new map on old map
 Photos of new developments [3]

[Total: 30]