Cambridge
O Level

Cambridge International Examinations
Cambridge Ordinary Level

GEOGRAPHY **2217/22**

Paper 2 Investigation and Skills **May/June 2016**

MARK SCHEME

Maximum Mark: 90

Published

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

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Section A

1 (a) Area A **[7]**

Types: Primary / Secondary / Other / Track
Pattern: Grid / blocks / (mainly) straight

Area B
Types: Third class / Other / Track
Pattern: Curves / bends
Dead ends / cul-de-sacs

Area C
Types: Regional / Third class / Other / Track
Pattern: Regional road parallel to coast / west - east
Third class / Other roads perpendicular to coast / parallel to each other / north – south
Dead ends / cul-de-sacs

(b) 282 283 **[1]**

(c) (i) E **[1]**

(ii) Track at 43–47mm from left **[3]**
River at 33–36mm from left
Plantation edge 25–28mm from left

(d) (i) 13 / 14 / 15 **[1]**

(ii) South-west **[1]**

(e) (i) Caravan site **[3]**
Camping site
Parking
Quay
Slip
Public telephone
Church / chapel

(ii) Beach / coast / sea **[3]**
Lake / lough
Forest
River / stream
Hill

[Max. 20]

2 **(a)** In southern hemisphere / south of equator **[2]**
In tropics
Between equator and tropic of Capricorn
In Pacific
East of Australia / north of New Zealand

(b) **(i)** New Zealand **[1]**

(ii) New Caledonia – near Fiji **[2]**
New Caledonia – cheaper travel
USA – rich country
USA – more opportunities

(c) **(i)** India **[1]**

(ii) 3 **[1]**

(iii) Migrate for work and return when get money / contract ends / retire **[1]**
Migrate but get homesick so return / don't adjust to new country
Migrate but family circumstances change

[Max.k 8]

3 **(a)** **(i)** 2011 **[1]**

(ii) 1896 **[1]**

(iii) 153 **[1]**

(iv) As magnitude increases number of earthquakes decreases **[1]**
As magnitude decreases number of earthquakes increases
Negative relationship

(b) **(i)** All correct as follows: **[1]**
= 9
1
= 6
2
8
3
5
= 6
4
= 9
11

(ii) Different population density **[3]**
Type of building / materials used
Earthquake proof buildings
Under land or sea
Population awareness / earthquake drill
Resources to deal with aftermath / rescue services
Rock type / ground stability

[Max. 8]

4 **(a)** Correct rainfall plot **[1]**

(b) **(i)** 26(°C) **[2]**
33(°C)

(ii) Graph is trending down **[1]**
Sun is not overhead in July
Sunshine hours are low

(c) Sunniest / maximum / 6 sunshine hours in March, April and May **[2]**
Cloudiest / minimum / 4 sunshine hours in June, July and August (and October)
Varies between 4 hours and 6 hours / range of 2 hours

(d) Broad leaves with drip tips **[2]**
Thin bark and shallow roots

[Max. 8]

5 **(a)** Flat land **[4]**
Soil
Flooded / water
(Rice) seed / young plants
Labour
Tools

(b) Everyone **[4]**
Less / lower quality meals
Cheaper foods eaten
Less preferred foods eaten
Children
Taken from school (to work)
Men
Migrate to urban areas
Women
Seek employment

[Max. 8]

6 (a) (i) Cassava roots **[2]**
Water
Fuelwood

(ii) Peels **[2]**
Juice
Fiber waste

(iii) Peeling **[1]**

(b) (i) Atteke is steamed and Gari is toasted **[1]**

(ii) 500kg **[1]**

(c) Air – from burning the fuelwood **[1]**
Water – excess water from the processing

[Max. 8]

Section B

7 (a) Source (1)
Mouth (1) **[2]**

(b) (i) Examples **[2]**

- Check measurement by repeating process and take average (1)
- Another student/pair checks the measurement (1)
- Make sure the tape is taut/stretched out/tight/flexed (1)
- Make sure the tape is at right angles/straight across the river (1)

(ii) Plot width of 7.6 at site 6. **[1]**

(iii) One general RESERVE mark for a diagram that shows measuring across a river or a cross-section. **[4]**

Three marks MAX for labelling. Diagram to show LABELS in correct context:

- Measuring stick/ pole / ruler (*must be labelled and in the water*) (1)
- Vertical (1)
- Equal distance apart (1)
- Pole / ruler touches bed (1)
- Water level/ river/ water named (1)
- Measure section which is wet (1)
- Tape measure across river (1)
- One ranging pole on each bank (1)

(iv) Two correct plots at Site 4 **[3]**

Plot at 6.4/0.4 (1)
Plot at 8.0/0.32 (1)

Shade in cross-sectional area = 1 mark

(v) 2.4 × 0.27 i.e. Width × average depth. **[1]**

Accept international conventions i.e. · instead of × and , instead of decimal point. Ignore any calculated figure they provide

(vi) 'partially' – 1 mark reserve. **[3]**

Supports: Area increases from site 1 to site 5/ increases from 0.65 sq m to 5.93 sq m (1 max)
Does not support: Area at site 6 is smaller than /decreases from site 5 / decreases to 3.57 sq m at site 6 from 5.93 sq m at site 5(1 max).
If state 6 is anomaly need to give a reason why.

(c) (i) Need to mention each piece of equipment once for each mark;1 MAX for each piece of equipment. **[4]**

Examples

Put poles/sticks/rods at fixed distance/ >5 up to 10 metres along river/at start and end of fixed distance (1 max)

Use tape measure to measure a fixed distance/10 metres (1 max)

Put orange in river at start of measured distance (1 max)

Start stopwatch/timer/watch when orange/ball is put in river/ stopwatch/timer/watch measures time it takes to travel the measured distance / stop stopwatch/timer/watch when orange reaches end of measured distance (1max)

(ii) Complete bar plot at 0.67 for site 6. No credit for shading. **[1]**

(iii) Examples of evidence that does NOT support hypothesis. Can refer to any two sites that provide relevant evidence **[3]**

- Velocity at sites 1 and 2 are identical (1) both are 0.29 m/s (1)
- Velocity at site 3 faster than site 4 (1) with 0.58 m/s compared to 0.46 m/s (1)
- Velocity is slowest at site 5 (1) being the lowest figure of 0.21 m/s
  all others are 0.29 m/s or higher (1)

Credit paired data to 1 mark RESERVE and MAXIMUM.

NOTE: there is no hypothesis mark here as the choice is given in the stem

(d) (i) Plot data of 3.57 sq m (Area) and 0.67 m/sec for site 6 on scatter graph. **[1]**

Plot must be an *x* with 6 written by it.

(ii) Evidence for partial relationship. **[3]**

There is a positive correlation between results at four sites OR refers to relationship at any three of sites 1236 that supports hypothesis (1)

e.g. Site 2 area 1.15 sq m and velocity 0.29 m/s both increase at Site 6 to 3.57 sq m and 0.67 m/s (1)

Site 5 however is an anomaly <u>because</u> has largest area but lowest velocity
(1 RESERVE and MAXIMUM for anomaly)

Credit paired data (need four figures) to show positive relationship

(iii) <u>Examples</u> **[2]**

- Large area so less water is in contact with sides/bed of channel (1) so there is less friction to slow river down (1)
- Small area so more water is in contact with sides/bed of channel (1) so more friction/rocks slow water down (1)

[Total: 30 marks]

8 (a) (i) Clothes and shoe shop **[1]**

(ii) Bank labelled <u>Fi</u> in box Y on Fig 6. **[1]**

(iii) Entertainment; **[1]**

(iv) <u>Examples</u> **[1]**

Mainly in the south (1)
Mainly west/south west of the main road OR Forest Street/ south of Finn Lane (1)
<u>NOT:</u> At bottom of map, to left of road.

(v) <u>Examples</u> **[1]**

Food shops are more clustered / two clusters (1)
Specialist non-food shops are more spread out/dispersed(1)

<u>Needs to be a comparison.</u>

(b) (i) Secondary source **[1]**

(ii) Graph completion; 1 mark per bar. **[2]**

Food shops –7 (1)
Entertainment +4 (1)

(iii) Hypothesis is <u>true</u> **[4]**

1 mark reserved for hypothesis conclusion plus 3 further marks for supporting evidence.

Evidence:

- Overall shop numbers have gone down (1) from 60–48 (1)
- Decrease in clothes / food / specialist non-food shops (1) from 8-5/20–13/29–26 (1)
- Overall number of services has gone up (1) from 33–34 (1)
- Increase in entertainment (1) from 5–9 (1)
- Decrease in finance (1) from 9–7 (1)
- Decrease in total number of shops and services (1) from 93–82 (1)
- Decrease in offices (1) from 2–1 (1)
- Only other services stayed same at 17 each year (1 MAX)

1 mark RESERVED and MAXIMUM for statistics of change.

(c) (i) Examples **[2]**

Young people/under 16 at school (1)
Working people/31–45 are at work so cannot shop (1)
Over 60s / retired can go shopping during the day (1)
Used random/systematic sampling system/did not use stratified (1)

(ii) Examples **[1]**

Repeated survey before/after working day/school hours (1)
Repeated survey on non-working days/weekends (1)
Keep a check of number in different age groups as they do the survey/limit numbers in each age group (1)
Stratified sampling targeting equal age totals (1)

(d) (i) Completion of pie graph: once a month 20 and < once a month 17. **[2]**

1 mark for dividing line at 83% (1)
1 mark for shading in order of key/table (1)

If dividing line is wrongly located at 20% from top, only give shading mark if the two slices are shaded correctly i.e. largest slice once a month

(ii) Completion of divided bar graph; retail park 40 & other town or city 22. **[2]**

1 mark for dividing line at 78% (1)
1 mark for shading in order of key/table (1)

If dividing line is wrongly located at 40% from right, only give shading mark if the two bars are shaded correctly i.e. largest bar retail park.

(iii) 1. Shops sell specialist goods (1)
2. Lack of choice when buying goods (1) **[2]**

(iv) No hypothesis mark as decision is given in the stem **[4]**

Evidence:
More disadvantages than advantages are given/over twice as many disadvantages(1)
247/69% disadvantages to 111/31% advantages (1)
Three most common answers are disadvantages (1)
More people visit all other shopping centres (1) only 12% visit town centre/ 88% shop away from town centre (1)
The largest disadvantage has 77 responses but largest disadvantage only 39 (1)

Credit comparative data to 2 marks MAX (Use of "only" is comparative)

(e) (i) Examples **[3]**

Plot locations/distances/addresses where shoppers came from on a map (1)
Draw desire lines / flow lines of where customers come from (1)
Draw a boundary around the plots to show sphere of influence / catchment area (1)

Credit also use of the information gained to study relationships between information they already have and the new information of knowing where they live.

e.g. frequency of shopping in town centre with distance travelled (1)
where people live and preferred shopping area (1)
where people live and main reason for shopping (1)

(ii) Examples **[2]**

Private information / intrusive question / personal (1 MAX)

Reason: Concern about robbery / harassment in the future /safety/ misuse of information (1 MAX)

[Total: 30 marks]