MARK SCHEME for the October/November 2015 series

2217 GEOGRAPHY

| 2217/23 | Paper 2 (Investigation and Skills), maximum raw mark 90 |

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.

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Section A

1 **(a)** 432/3 886/7 [1]

(b) (Medium / dense) bush [1]

(c) **(i)** Power line [1]

(ii) Wide tarred road [1]

(iii) Island / braiding [1]

(iv) Reservoir [1]

(v) Arrow from west to east [1]

(d) **(i)** 340–345° [1]

(ii) 2200–2400 metres [1]

(e) 45 (metres)
102 [2]

(f) Chipiso   58–61 mm from left
Mazowe   28–32 mm from left
Pote   74–77 mm from left
Southern edge of cultivation 87–90 mm from left
Extent of cultivation between river and southern edge indicated [5]

(g) High / hilly in the south / lower in north
Steeper in the south / gentler in north
Heights to 1080 m
Lowest 940 m
Isolated hill
Valley

Rivers in east flow east
Rivers in west flow north
Tributaries
Dam
Reserve 1 for each of relief and drainage [4]

[Max 20]

2 (a) (i) February
August [2]

(ii) Dec / Jan / Feb / Mar [1]

(b) (i) Boating [1]

(ii) Museum
Nightclub
Cable car [1]

(c) (i) X – Goes to top of ski run / goes to high point for better views
Y – Goes to high point for better views
Z – Cheaper to build as shorter / lower / fewer towers [1]

(ii) X – Construction will damage wildflower meadow
Y – Disturb nesting site for birds
Z – Doesn't lead anywhere interesting [2]

[Max 8]

3 (a) Asia
S / E / SE (Asia)
1 in S America / Brazil
Mostly within tropics [3]

(b) (i) Pakistan / USA [1]

(ii) China / Philippines / Indonesia [1]

(iii) Ideas relating to too many people – high population / refugees
Ideas relating to not enough land – soil erosion / land used for cash crops
Ideas relating to temporary need – failure of harvest / hazard
Demand for different variety / quality / type [3]

[Max 8]

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4 (a) Above river / lake level / dry point site / above flooding
On gentle slope / sloping
Valley side / on hill
Along road / railway [2]

  (b) Defense
Water supply from river / lake
Above flood level / floodplain
Easy to build on gentle slope
Wood for building / fuel
Land for farming / food supply
Fish from river
Electricity
Transport by river / lake
Transport route across valley [4]

  (c) Farmers – loss of land / more people to leave gates open, etc.
Tourists – spoil view / ruin country walks
Environment group – water pollution increase / wildlife disturbed / trees cut
Local people – overcrowding of facilities / noise and construction disruptive [2]

[Max 8]

5 (a) Line at 32%
Line at 42%
Shading as in key [3]

  (b) (i) Oil [1]

    (ii) Russia [1]

    (iii) Both have coal as highest
Both have oil as second highest
Both have 1% nuclear
Both have 5% renewable [3]

[Max 8]

6 (a) (i) –0.17 °C to –0.2 °C [1]

    (ii) 550 [1]

    (iii) 1.175 to 1.2 °C [1]

  (b) (i) 600–800 [1]

    (ii) 1400–1600 [1]

    (iii) 1400–1600 [1]

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(c) Melting of Arctic ice / ice caps / glaciers
Rise in sea level / average tide level
Extreme tides / spring tides / storm surges more likely to overcome sea defences
Sea expands [2]

[Max 8]

Section B

7 (a) (i) C   [1]

    (ii) Clinometer, ranging poles
If more than two answers, –1 for each incorrect answer   2 @ 1   [2]

   (iii) Lay tape measure out along transect line
Put poles at break of slope / at equal or set distances apart / 5 m or more apart
Measure / mark distance between ranging poles
Poles must be vertical
Sight other ranging pole at top / agreed height / line up
Read / measure / record angle – need reference to **clinometer**
Move poles across/ along profile / transect / to next site / repeat measurement **along** transect   [4]

   (iv)

Description	Type of dune
Oldest dunes which are furthest inland	Grey (dune)
Most recently created dunes	Embryo (dune)
Tallest dunes	Yellow (dune)

       [1]

    (v) Obstacle / plant on / behind the beach
Wind picks up sand / blows sand / carries sand / moves sand
Friction with obstacle/plant slows down wind
Sand is deposited around obstacle / traps sand
This increases size of obstacle so deposition continues and dune grows
Plant roots hold dune together   [3]

  (b) (i) Put quadrat / grid on ground / alongside tape / put quadrat down
Estimate percentage of quadrat / count number of squares which include vegetation cover
Do more than one measurement **and** calculate the average
Record results / write down measurements   [3]

    (ii) Plot 60% cover at 190 m, 75% cover at 210 m   2 @ 1   [2]

(iii) Hypothesis is **correct** / true / generally / mostly /partially correct – 1 mark reserve

e.g. Percentage of cover increases from 20% at 10 m / site 1 to 95% at 290 m / site 15 – **need 2 percentages and 2 distances or site numbers**

Exception / anomaly to the pattern at: 30 and 50, 110 and 130, 150 and 170, 210 and 230, 290 and 310 m (or sites)

e.g. percentage of cover is 30% at 30 m / site 2 and 25% at 50 m / site 3 – **need 2 percentages and 2 distances or site numbers**

OR: % is **higher** at 30 m or site 2 than at 50 m or site 3 / **lower** at 50 m or site 3 than at 30 m or site 2

Need 1 supporting set of statistics and 1 anomaly set of statistics   [3]

(c) (i) Photograph / take sample / sketch / written description of vegetation

Look up in book / internet / vegetation chart

Ask ranger / teacher / expert   2 @ 1   [2]

(ii) May be other different types of vegetation / will not see variety or diversity

Main type of vegetation may only just be over 50%   [1]

(iii) Credit any two changes from Table 1. Need 2 vegetation types and distance or description of position

Accept distance or site number.

e.g. Sea couch grass at 10 m / site 1 and lyme grass at 30 m / site 2

e.g. Sea couch grass and lyme grass occupy area closest to sea and marram grass occupies large area behind it

e.g. 1. Sea couch grass 0–30 m away
    2 Gorse / heather 270 m away from sea = 1 mark

No Hypothesis mark   2 @ 1   [2]

(d) (i) Tourists walking / trampling / cycling / having a picnic / dropping litter / starting a fire / pulling up plants / driving on dunes

Kill / damage / destroy vegetation / vegetation dies / vegetation cover decreases / ruins vegetation   [2]

(ii) Notice boards / visitor centre / signs / notices / leaflets **to** educate / inform / tell tourists

Marked / signed footpaths / build or make a footpath

Boardwalk across area

Fence off / rope off areas / restricted access

Barriers to prevent vehicle / cycle access / create car park

Rangers to monitor / advise tourists

Charge admission to dunes

Designate picnic sites / ban barbecues or picnics

Litter bins   [4]

Total 30 marks

8 **(a)** **(i)** Central Business District [1]

(ii) Factory [1]

(b) **(i)** Ideas such as:
Choose a variety of people / choose people of different age or gender
Don't just ask people you know
Introduce yourself / explain purpose of survey
Have a system for choosing people such as every 10th person / random /
have a sampling method
Accept if people don't want to answer or fill it in / don't argue / be polite / thank them
Don't approach people in a big group / work in pairs / don't work alone
Don't block pavement / doorway
Go to different parts (of the CBD) / don't all go to the same area [3]

(ii) **15**–30 (or reasonable alternative between 30–40)
31 (or reasonable alternative) – **60**
Accept reasonable ranges if not overlapping 2 @ 1 [2]

(iii) Divided bar graph completion
1 mark for dividing lines at 71 and 91
1 mark for shading [2]

(iv)

Opinion	Number of answers	Weighting	Score
Agree strongly	31	+2	+62
Agree	40	+1	+40
Disagree	20	−1	−20
Disagree strongly	9	−2	−18
Total score			+64

1 mark for 4 correct scores
1 mark for correct total = 64
Must have the + and – symbols [2]

(v) Answer from **b(iv)** plotted accurately (ecf) [1]

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(vi) Hypothesis is **correct** / true / mostly true – 1 mark reserve (✓HA)

Table 2 / Fig. 7
Over half agreed with 3 of the 4 statements
Majority agreed that shop has brought more goods and services / attracts people to town more often / has provided more jobs
Less than half agreed / more than half or most disagreed that shop has increased competition

Credit data if added together or paired for 1 mark max
e.g. 64 agree that the store has brought more services (accept statement 1)
e.g. 31 strongly agree and 40 agree / 71 agree that shop attracts people to the town centre (accept statement 2)

Fig. 8
All statements have positive scores
People are most positive about jobs created
People are least positive about competition to other shops

Credit data for 1 mark max
e.g. score / index for brought goods and services = 63 /
shops attract people = 64 / provides jobs = 140 (accept reference to statements 1, 2, 3, 4)
average score for all 4 statements is 68.75   [4]

(c) (i) **Scores may vary between students:**
Carry out pilot study
Work in groups **and** discuss / agree / check score
Calculate the **average** score from a group of students

NOT: compare score with other groups

Score may vary at different times:
Make sure surveys are done at same time / agree a time for survey   [2]

(ii) Bar drawn to 22   [1]

(iii) **Disagree** with conclusion / students' decision / hypothesis is **false** – 1 mark reserve (✓HA)
New town has a **positive** impact (on the environment)
Higher EQ results or score / positive descriptions / scores over 21 **are** nearest to new shop / sites C or D
Lower EQ results or score / negative descriptions / scores below 21 **are** furthest from new shop / sites B or E

Credit contrasting paired data of **total** scores for 1 mark maximum
e.g. C scores 27 and E scores 17, D scores 30 and B scores 14,

Points C/D are nearer the new shop and have higher scores than points B/E which are further away = 2 marks

If no decision credit evidence   [4]

(d) (i) Recording sheet should include:
Street name / location / sample point / site / survey point
Number of pedestrians / tally label / example of tallying method (NOT blank space)
Total number
Time / day / date　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　[3]

(ii) 2 or 3 students / group go to each survey point
All start the count at the same time / synchronise watches
All count for the same length of time / finish at the same time / 30 mins
Do more than one count in a day / do it on several days or on two different days / do one count in the morning and one in the afternoon
Note down / record / count people passing the point / one person counts and one person writes down
Fill in the recording sheet / fill in the tally / use a clicker　　　　　　　　　　　　　[4]

[Total 30 marks]