Specimen

From 2018 the mark scheme design/layout has improved.
The content and marks remain the same.
1 (a) Wind would affect temperature; easier to see effects of building/ground surface; rainfall would affect relative humidity

2 @ 1 mark [2]

(b) (i) Away from the influence of buildings; no trees nearby to create shade; on grass so this will not absorb heat/alter temperature.

2 @ 1 mark [2]

(ii) Max. temperature 12–13°C inclusive; min. temperature 1–2°C inclusive; present temperature 3–3.2°C inclusive.

3 @ 1 mark [3]

(c) (i) Quick/instant reading
Accurate to a decimal point

[1]

(ii) Unsure if same location for each reading; height at waist will vary between people; student error in timing; 3 days may not be long enough for reliable figure; effect of body heat on reading.

1 @ 1 mark [1]

(iii) Temperature will change during the day; shows the range of temperature during the day.

1 @ 1 mark [1]

(d) Day 1 cold morning but warm afternoon, day 2 colder, day 3 similar to day 2; mornings always colder than afternoons. Use of paired statistics to show change to 2 marks max.

[4]

(e) (i) G: 5.4° at 9 m, H: 5.8° at 2 m.

2 @ 1 mark [2]

(ii) Best fit line straight or curved;

1 @ 1 mark [1]

(iii) Hypothesis is true (1 mark reserve)
Negative relationship on graph/temperature decreases as distance increases
Anomaly at C – highest temperature but not nearest to building
Use of paired statistics to show change to 1 mark maximum

[4]

(iv) Buildings/tarmac/concrete absorb heat from sun or internal heating system
Buildings radiate heat around them
Aspect/south facing/facing sun
Funnelling effect of buildings
Shade from sun by trees/buildings

2 @ 1 mark [2]
(f) Sites with plants = A + B + F = 75 + 77 + 73 = 225/3 = 75%.
Sites without plants = C + D + E + G + H = 76 + 75 + 73 + 75 + 77 = 376/5 = 75.25%.
Credit “No” or negative statement.
not a higher relative humidity.
1 mark for calculations, 1 mark for decision

(g) (i) Hypothesis 2 – To some extent/No (1);
little difference/almost same between areas with and without vegetation.

(ii) Collect data on more than three days;
collect data more than twice a day;
collect data in other months/other seasons;
students check each other’s readings;
Same person takes readings to reduce height difference.
3 @ 1 mark

[Total: 30 marks]
(iv) Length of stay:
If tourists stay longer in the village they spend more money
Demand for different services such as restaurants if people stay more than 1 day

Accommodation:
If most people visit for 1 day less accommodation is needed
More demand for hotels creates most jobs/most income
Youth hostel/campsite may create more demand for bars/fast-food

1 mark reserve for length of stay and accommodation [3]

(v) Divided bar graph completion
dividing line correct = 1 mark, shading = 1 mark [2]

(d) Hypothesis is true/generally true (1 mark reserve)
Residents’ views on effects of tourism are generally positive
40% of residents say there are no main problems
Credit paired use of statistics to support evidence to 2 marks max [4]

(e) Equipment – recording sheet, watch
Suggested locations of traffic survey
Times of traffic survey during day
Different days of week – weekday and weekend
Different seasons to compare results
Methodology – tally system
Reliability – e.g. all surveys done at same time [4]

[Total: 30 marks]