**UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS**

International General Certificate of Secondary Education

**MARK SCHEME for the June 2004 question papers**

| | |
|---|---|
| | **0460 GEOGRAPHY** |
| **0460/01** | Paper 1 (Core), maximum mark 75 |
| **0460/02** | Paper 2 (Extended), maximum mark 75 |
| **0460/04** | Paper 4 (Alternative to Coursework), maximum mark 60 |

These mark schemes are published as an aid to teachers and students, to indicate the requirements of the examination. They show the basis on which Examiners were initially instructed to award marks. They do not indicate the details of the discussions that took place at an Examiners' meeting before marking began. Any substantial changes to the mark scheme that arose from these discussions will be recorded in the published *Report on the Examination*.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes must be read in conjunction with the question papers and the *Report on the Examination*.

- CIE will not enter into discussion or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the June 2004 question papers for most IGCSE and GCE Advanced Level syllabuses.

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**Grade thresholds** taken for Syllabus 0460 (Geography) in the June 2004 examination

| | maximum mark available | minimum mark required for grade: | | | |
|---|---|---|---|---|---|
| | | A | C | E | F |
| Component 1 | 75 | 51 | 32 | 24 | 20 |
| Component 2 | 75 | 45 | 34 | 25 | 20 |
| Component 3 | 60 | 50 | 34 | 20 | 15 |
| Component 4 | 60 | 44 | 34 | 22 | 18 |

The threshold (minimum mark) for B is set halfway between those for Grades A and C.

The threshold (minimum mark) for D is set halfway between those for Grades C and E.

The threshold (minimum mark) for G is set as many marks below the F threshold as the E threshold is above it.

Grade A* does not exist at the level of an individual component.

June 2004

INTERNATIONAL GCSE

# MARK SCHEME

## MAXIMUM MARK: 75

## SYLLABUS/COMPONENT: 0460/01

## Geography
## Paper 1

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**The features of the marking scheme**

Each question carries 25 marks. Candidates cannot earn above the maximum marks available within each sub section.

The marking scheme attempts to give guidance about the requirements of each answer and lists a number of responses which will earn marks along with the general principles to be applied when marking each question.

It should be noted that candidates can earn marks if their answers are phrased differently provided they convey the same meaning as those in the mark scheme. THE CANDIDATES DO NOT NEED TO USE THE SAME WORDING TO EARN MARKS.

The notation '**etc**' at the end of an answer in the mark scheme signifies that there may well be other correct responses or examples that can be given credit. Providing the statement is true, relevant to the question asked and not repetition of a previous point made credit should be given.

A point made within one sub-section which is an answer to the question set in a different sub-section should not be given credit as each sub-section asks different questions which require independent answers.

The mark scheme uses semi colons (;) to separate marks and diagonals to separate alternative answers.

During coordination the mark scheme is modified to add points agreed after discussion or to delete any points not allowed. All examiners should ensure that their modified scheme is fully up-to-date before marking begins.

**Question 1**

**(a) (i)** *Ideas such as:*

- large number of people seen as an advantage/government saw population growth as healthy;
- country could afford people/oil revenues;
- country had sufficient space/resources/was not overpopulated etc

2 at 1 mark [2]

**(ii)** *Ideas such as:*

- lower income from oil/resources declining;
- economic decline;
- growth was too rapid/population would double in less than 30 years/population explosion.

2 at 1 mark [2]

**(iii)** *Ideas such as:*

- further decrease in oil revenues/exhaustion;
- fewer family planning clinics/primary schools were built;
- implications such as - no increase in women becoming educated/literate/many Nigerian women still married before 15yrs/no increase in use of contraception
- etc (MAX 2).

3 at 1 mark [3]

**(iv)** *Ideas such as:*

- education in/awareness of family planning;
- realisation of problems of too many people;
- women more likely to obtain employment/delay child bearing;
- raises average age of marriage/decreases reproductive span etc

2 at 1 mark [2]

**(v)** *Ideas such as:*

- tradition;
- religious pressures;
- zeal for son/inheritance;
- ignorance of large sectors of the population on need to reduce B.R/illiterate population;
- size of country/dispersed nature of population/isolation of rural areas;
- expense of introducing family planning policies/clinics;
- lack of/unpopularity of abortion/sterilisation/contraception;
- lack of education re. birth control;
- impact of early marriage;
- need children to work on farms/in home;
- need children to send out to work/beg;
- large number of children to look after parents in old age;
- high infant mortality/hence large families;
- falling death rate etc

6 at 1 mark or development [6]

**(b) (i)** 20-24 yrs all countries decline - 30-34 yrs some increase.

1 mark [1]

**(ii)** Accept in range -20%/20% reduction to -22%

1 mark [1]

**(iii)** *Candidates can be credited for statements such as:*
increase in some age groups in Sweden – decrease in all in Irish Republic;
generally larger change in Sweden than Irish Republic;

Development marks available up to MAX 3 for illustration by use of statistics

4 at 1 mark or development [4]

**(iv)** *Ideas such as:*
- emancipation of women/freedom to be more than child bearer;
- longer time in education hence later marriage/less likely to bear children;
- career development/working life first;
- medically safe to bear children later;
- effective birth control methods;
- change in trend/fashion;
- desire for material possessions;
- education re. birth control;
- lowering of IMR;
- people aware of negative consequences of growth;
- high costs of living/child bearing in early years;
- second marriages etc

4 at 1 mark or development [4]

TOTAL 25 MARKS

**Question 2**

**(a) (i)** A 6 km
B 5 km

2 at 1 mark [2]

**(ii)** Gymnasium and post office added correctly (distance and sector required)

2 at 1 mark [2]

**(iii)** *Ideas such as:*
- convenience goods/low order - short distances;
- comparison goods/specialised services - longer distances;
- frequency of visits;
- variation in number/spacing/distance of services
- variation in spheres of influence;
- variation in threshold population;
- perceived attractions of some services rather than others etc

3 at 1 mark or development [3]

**(b) (i)** Marks to be allocated based on line graph drawn and on any 3 of the following:

- low level in CBD (Zone 1)
- low level in forest (between zone 3 and 4)
- medium level in Inner City (Zone 2)
- high level in suburbs/villages to left (zones 3 and 4)
- medium level in suburbs/villages to right (zones 3 and 4)

3 at 1 mark for correct identification of at least one area of low, medium and high density. [3]

**(ii)** *Marks to be allocated based on reasoning included on annotation of line graph. Ideas such as:*

- low level in CBD (Zone 1) as most of land is used for service provision/cost
- of land is too high/there are only a small number of apartments;
- low level in forest (between zone 3 and 4) as people do not live in it/trees are
- being conserved/it is used as a recreation area;
- medium level in Inner City (Zone 2) as there are commercial land uses as
- well as some residential
- high level in suburbs/villages to left (zones 3 and 4) as all land is
- residential/there are high rise flats.
- medium level in suburbs/villages to right (zones 3 and 4) as high cost houses
- are likely to be large/have garden space etc

3 at 1 mark [3]

**(iii)** **A** *Ideas such as:*

- older properties have fallen into disrepair/high cost of repair;
- spread of CBD/offices;
- need to use land more intensively;
- demand for/building of apartments;
- building of houses with better amenities/or examples;
- new road developments;
- new leisure/shopping centres;

3 at 1 mark [3]

**B** *Ideas such as:*

- older houses add character/retain culture/image;
- old houses are often large/well constructed;
- reduce idea of 'dead heart';
- convenient residential location close to workplaces/CBD
- social advantages of improved housing rather than flats
- people have lived there for many years/can't afford to move;
- community spirit;
- cheaper option for local authority;
- to restrict outward expansion etc.

3 at 1 mark [3]

**(c)** *Candidates need to identify a residential area in a named settlement (though there is no mark available for this alone) and describe the changes which have taken place as a result of either inward or outward migration. Be prepared to accept any settlement, either rural or urban, crediting appropriate changes resulting from the location.*

Credit 1 mark for residential area identified along with correct reference to either inward or outward migration as appropriate.

*Changes such as:*
- building of housing estates/high rise flats/demolition of housing;
- change in characteristics of housing/e.g. replacing terraced with high rise;
- provision/reduction of amenities or examples such as bus services, rail
- services, schools, clinics, leisure centres, shops etc (MAX 2);
- improvement of road network etc

5 at 1 mark or development [6]

TOTAL 25 MARKS

**Question 3**

**(a) (i) A** Stevenson screen

1 mark [1]

**B** *Ideas such as:*
- legs,
- height 120cm;
- louvres on sides;
- painted white;
- insulated/double roof;
- drop down door/down opens away from sun etc

4 at 1 mark [4]

**C** *Ideas such as:*
- protects instruments from sun's rays/white to reflect sun's rays;
- allows shade/true temperature of the air to be measured;
- allows flow of air;
- accommodate instruments such as thermometers etc

2 at 1 mark [2]

**(ii) A** *labels such as:*
- tube/capillary;
- alcohol;
- mercury;
- indices;
- indicator of max/min temperatures;
- bulb;
- scale etc

3 at 1 mark [3]

**B** *Ideas such as:*
- readings taken at lower end of each index;
- right limb - highest temperature /19°C;
- left limb - lowest temperature /13°C;
- readings at regular time each day
- read at eye level;
- reset with magnet etc

3 at 1 mark [3]

**(b) (i) A** Precipitation 1200mm-2000mm, temps. 6-30°C or hot/wet;
**B** Precipitation 70-1300, temps. -20 to -1°C or low temp/low to medium precipitation.

2 at 1 mark [2]

**(ii)** *The freeze thaw process is the only acceptable answer here. Accept ideas such as:*
- freeze-thaw/frost shattering (1 mark reserved);
- rain collects in cracks/joints;
- temperature falls;
- water freezes – expands;
- stress on cracks/joints;
- joints opened;
- melting;
- more water enters the joints/repetition;
- angular fragments/scree/loose rock (1 mark reserved). etc

5 at 1 mark [5]

**(iii)** *Accept carbonation, oxidation, hydrolysis or hydration.*

- e.g. **carbonation** (1 mark);
- rain + C02/carbonic acid;
- reacts with limestone/forms calcium bicarbonate;
- washed away/dissolved/CaCo3 is soluble;
- opening of joints etc

- e.g. **oxidation** (1 mark);
- oxygen in water;
- reacts with iron minerals to form iron oxides/hydroxides/rust;
- iron minerals crumble;
- weakens rock etc

3 at 1 mark [3]

**(c)** *Ideas such as:*
- hardness;
- composition;
- size of grains,
- jointing and other weaknesses;
- permeability;
- colour etc

2 at 1 mark [2]

TOTAL 25 MARKS

**Question 4**

**(a) (i)** *Ideas such as:*

- plate boundaries;
- plates moving towards each other/converge;
- oceanic plates move towards continental;
- subduction zones;
- heat/friction;
- upper layer of oceanic crust partly melted at depth/destruction of
- crust/destructive margin;
- rising magma;
- through fractures etc

4 at 1 mark or development [4]

**(b) (i)** *Labels on diagram such as:*

- alternate layers;
- ash/cinders and lava;
- slopes steeper at summit;
- main cone;
- crater;
- secondary cones;
- vent/pipe;
- magma chamber;
- dyke etc

4 at 1 mark [4]

**(ii) A** *Ideas such as:*

- melting snows;
- heavy rainfall/water content of magma;
- mix with ash;
- flow down steep slopes/gravity;
- triggered by earthquakes etc

2 at 1 mark [2]

**B** *Ideas such as:*

- loss of life;
- destroy buildings/homes;
- inundate farmland/destroy crops/livestock;
- disrupt communications;
- bring down power lines/damage water pipes;
- destroy workplaces/damage factories;
- occur without warning/at great speed etc.

2 at 1 mark [2]

**(c)** *Ideas such as:*

- plates move apart/diverge;
- sea floor spreading;
- fractures;
- earthquakes;
- rising magma/sea floor volcanoes;
- solidifies/new crust/piles up;
- oceanic ridge/volcanic islands
- tsunamis etc

4 at 1 mark or development [4]

**(d) (i)** *Ideas such as:*

- Move away from areas of instability;
- Forecasting/warning to public;
- build earthquake proof buildings/or specific references to structures to MAX 3;
- awareness/what action to take;
- practise drills;
- emergency services organised;
- emergency food/supplies etc

4 at 1 mark or development [4]

**(ii)** *Ideas such as:*

- cost;
- may occur in country with low GNP;
- devastation may cover a wide area/large-scale/affects many people;
- magnitude of disaster/intensity;
- damage to infrastructure;
- damage to economy;
- impacts on food supplies/famine;
- impacts of disease on recovery;
- lack of hospitals/health care hinder recovery;
- homelessness;
- psychological impacts etc

5 at 1 mark or development [5]

TOTAL 25 MARKS

**Question 5**

**(a) (i)** *Ideas such as:*

- mechanisation;
- rich countries can import food/ raw materials;
- industry and services more important;
- labour prefers to work in industry and services/or reasoning
- many raw materials exhausted etc

2 at 1 mark [2]

**(ii)** *Features such as:*

- largest sector – tertiary;
- secondary second largest.

2 at 1 mark [2]

**(iii)** *Changes such as:*

- increase of proportion in tertiary;
- decline in primary;
- decline in secondary.

3 at 1 mark [3]

**(iv)** *Ideas such as:*

- competition in manufacturing with other countries;
- more developed economies - greater demand for services;
- greater development of high tech. industries;
- more sophisticated/educated labour force;
- countries can afford to import primary products/manufactured goods;
- more live in urban centres where secondary and tertiary sectors concentrated;
- manufacturing/agriculture becoming more mechanised;
- tertiary employment better paid;
- exploiting cheaper workforce in manufacturing in developing countries etc

4 at 1 mark or development [4]

**(v)** *Ideas such as:*

- greater percentage in primary industries;
- smaller/larger percentage in secondary industries;
- smaller percentage in tertiary industries

3 at 1 mark [3]

**(vi)** *Ideas such as:*

- developing countries - greater dependence upon agriculture/raw material exploitation;
- subsistence agriculture;
- limited development of manufacturing/import manufactured goods;
- less demand for/ability to afford services/few services available or egs
- lack of reliable infrastructure;
- lack of investment;
- lack of skills development etc

3 at 1 mark [3]

**(b) High-technology industries**

*Ideas such as:*

**transport** -

- not of fundamental importance in location;
- but advantage to be near good roads – for assembly of large number of components;
- items low bulk and high cost;
- industry footloose;
- high speed transport – components/products;
- proximity to/links to airport;
- major road links;

**labour** -

- highly skilled – universities/technical colleges;
- workforce suited to assembly work;
- female labour - relatively low wages;
- research and development – universities/research firms;
- skilled labour/well educated;
- expert management;
- different skill levels – subcontracting/division of labour;

**markets** –

- large market;
- widely dispersed – regional/international;
- access to other firms - industrial linkages;

**other factors e.g. siting factors –**

- science parks/industrial estates;
- greenfield sites/edges of urban areas;
- pleasant surroundings/countryside attracts labour;
- possibly low cost land areas,

**education/research**

- research and development;
- universities;
- government support etc

**OR Small-scale cultivation of cash crops**

**market** -

- urban areas;
- large retail outlets;
- export markets;

**transport** –

- road;
- refrigeration;

**labour**

- skilled labour;
- labour intensive;
- training;
- possibly family labour;

**other factors e.g.**
**physical advantages -**

- soils – light;
- well drained;
- climate advantages - high temperatures;
- heavy reliable rainfall;

**technology** -

- water supply/water sprinklers/irrigation;
- motorised soil tillers/other machinery;

- fertilisers;
- sprays/pesticides;
- use of glass;
- research - plant genetic engineering;
- soilless culture/hydroponics;
- controlled conditions/automation etc

Whichever example is selected allow 1 mark for named location. You may award MAX 3 marks for simple points, examples of which include:
good transport;
lots of workers;
near market;
lots of machinery etc

8 at 1 mark [8]

TOTAL 25 MARKS

**Question 6**

**(a) (i)** **Urban sprawl** – spread of built up areas into surrounding countryside.
**Overgrazing** – keeping of numbers of livestock which exceed the carrying capacity of the land.
**Deforestation** – removal of tree cover from the land.

3 at 1 mark [3]

**(ii)** *Ideas such as:*
- depletion of fish stocks;
- population increase;
- loss of soil fertility/soil erosion;
- poverty/4bn live on less than US$2 a day;
- building of roads/urban areas on farmland;
- lack of water to irrigate etc

2 at 1 mark [2]

**(iii)** *Ideas such as:*
- loss of habitats;
- deforestation;
- water pollution;
- destruction of food chains;
- hunting/poaching;
- agricultural activities such as pesticides/hedgerow removal etc

2 at 1 mark [2]

**(b)** *Candidates need to select 2 problems and explain their causes.*

**Urban sprawl**
*Ideas such as:*
- attractions of urban centres;
- natural population growth;
- demand for larger houses/more garden space
- any pull/push factors (no MAX) etc

**High concentrations of $CO_2$**
*Ideas such as*
- industrial pollution;
- transport;
- burning of fossil fuels;
- deforestation;
- burning of forests etc.

**Deforestation**
*Ideas such as*
- increased demand for agricultural land for cash crops;
- use of land for ranching;
- increase in population;
- increase in logging;
- increased world demand for timber;
- quarrying/mining;
- road building;
- flooding land for HEP generation;
- fuel wood; etc

**Shortages of drinking water**
*Ideas such as:*
- water supplies limited in areas of demand;
- population increases;
- pollution of river water - industrial effluent/sewage;
- inadequate infrastructure/reservoirs;
- cost implications;
- competition with other uses of water e.g. irrigation;
- climate problems - inadequate rainfall;
- high evaporation rates;
- wastage etc

**Soil erosion**
*Ideas such as:*
- overcultivation;
- overgrazing;
- monoculture;
- ploughing up and down slopes;
- abandoning cultivated land - shifting cultivation;
- deforestation/loss of roots to anchor soil;
- less interception;
- planting in regions of unreliable rainfall;
- dry farming;
- removal of hedges;
- heavy machines compact soils/increasing run-off etc

4 at 1 mark or development for each of causes of two problems [8]

**(c) (i)** *Ideas such as:*
- ultra-violet radiation/incidence of skin cancer
  1 mark
- reduction in use of CFCs
  1 mark [2]

**(ii)** *Be prepared to accept a wide variety of points here though the following ideas are likely to be expressed on the importance of extending protected areas:*

- protection of fauna e.g. animals/birds;
- protection of flora;
- maintaining biodiversity;
- limited/declining number of wilderness/protected areas;
- importance for educational/research purposes;
- importance for tourism;
- legacy for future generations;
- find plants/substances of medicinal use;
- maintain oxygen/CO2 balance etc

*The following ideas are likely to be expressed on the difficulties of extending protected areas:*

- pressure from: energy production;
- industrial growth;
- urban growth;
- expansion of agricultural activities;
- demand for timber
- population pressure;
- prevalence of profit motive or e.g.;
- need for/difficulty of international agreement/cooperation;
- difficulty of changing mind sets;
- cost/physical difficulties of implementation etc

8 at 1 mark or development with a MAXIMUM of 6 marks on importance/difficulties.

[8]

TOTAL 25 MARKS

June 2004

INTERNATIONAL GCSE

# MARK SCHEME

## MAXIMUM MARK: 60

## SYLLABUS/COMPONENT: 0460/02

**Geography**
**Paper 2**

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**1. (a) (i)** 313257 **[1]**

**(ii)** factory (sugar) **[1]**

**(iii)** 1830 – 1930 (m) **[1]**

**(iv)** 51 - 53° **[1]**

**(v)** coconut and sugar **[1]**

**(b)** quarrying,
power station / electricity generation,
factory,
cultivation / plantation / sugar growing / coconut growing / agriculture / farming /crop growing ,
water works / pumping station

dam = 0
sugar Mill = 0
nutmeg station = 0

3 at 1 Mark **[3]**

**(c)** cinema (drive-in = 0 )
hotel,
museum,
library,
theatre,
zoo,
botanical garden,

golf = 0
market = 0
church = 0
chapel = 0

5 at 1 Mark **[5]**

**(d)** headland / point / promontory / peninsula
bay / cove
sand / mud / beach
cliff / steep slope
(extract from names but not from Point Salines)

4 at 1 Mark **[4]**

**(e)** (Any three:)

follows valley / in a valley
avoids steep slopes / keeps to gentle slopes / flat qualified
links settlement / houses / villages / named settlements
avoids highland / at foot of highland / keeps to low / avoids mountain
parallel to slope / along slope

**[3]**

(flat as possible / on flat / on level = 0 )

3 at 1 Mark

**2.** **(a)** Canada **[1]**

**(b)** Canada **[1]**

**(c)** Bangladesh **[1]**

**(d)** United Kingdom **[1]**

**(e)** On graph 1mm = 2 kilogrammes

Bangladesh = 12 mm (6 squares)

Canada = 16 mm (8 squares)

UK = 72 mm (36 squares)

Must be done on insert. Use of other labels allowable but must be clear. If a bar graph (not a divided bar) allow max. 1 for one correct measurement. **[2]**

**3.** **(a)** **(i)** 37% / 38% **[1]**

**(ii)** Between Secondary and Tertiary upward trend (line ends above 2000 level but not above 100%)

Between Tertiary and Primary downward (line ends below 2000 level but not below 0%)

1 Mark each line

2 at 1 mark **[2]**

**(b)** labour intensive,
textiles / cloth / carpets / rugs / blankets etc
intermediate technology / simple machines / old-fashioned machines / wooden machines
cramped / crowded conditions,
female workers / women,
weaving / tapestry,
small premises / small scale,
little / no power,
small workforce / 3 or 4 workers
little capital

Skill = 0
Tourist market = 0

4 at 1 mark **[4]**

**4.** **(a)** resort / seaside resort / holidays / tourism / fishing

**[1]**

**(b)** (Any two:)

beach (therefore resort) / sand / shingle
cove / bay (therefore shelter)
gentle slope (for building)
valley (for shelter)
shelter

2 at 1 mark **[2]**

**(c)** bay / cove
headland / point / promontory
stack / island / stump
arch / cave
fault / crack / fissure
beach / sand / shingle
cliff
wave cut platform

4 at 1 mark **[4]**

**5.** **(a)** **(i)** Mobile

**[1]**

**(ii)** most of area on land used / oil on land exhausted
oil on land therefore oil off-shore

1 at 1 mark **[1]**

**(b)** firm land / not in swamp / edge of swamp
(dredged) channel to sea / estuary / sheltered harbour
railway
centre of many oilfields / near oilfields
pipelines
labour from Port Harcourt / town
market in Port Harcourt / town
reclaimed / cheap (swamp)

4 at 1 mark **[4]**

**6. (a)** (must have key & order correct)

shops & offices 10% = 5 small squares
transport 6% = 3 small squares
manufacturing 12% = 6 small squares

2 at 1 mark **[2]**

**(b) (i)** A

**[1]**

**(ii)** B

**[1]**

**(c)** others – more in A / less in C
more recreation in A / less in C
less demolished / derelict in A / more in C
more housing in A / less in C
less Manufacturing in A / more in C
less Transport in A / more in C
less Shops and Offices in A / more in C

3 at 1 mark **[3]**

**OR** by pairs of figures as follows:

| | **A%** | **C%** |
|---|---|---|
| other | 10 | 9 |
| recreational | 11/12 | 9 |
| demolished/derelict | 1 / 2 | 9 |
| residential | 49/50 | 25/26 |
| manufacturing | 11/12 | 22 |
| transport | 6 | 9 |
| offices/Shops | 10 | 16 |

**7. (a)** 1961 metres

**[1]**

**(b)** densely populated generally
mainly below 1680m / 1830m
mainly Lower area
near all-weather road
near tracks / footpaths
in bush and scattered trees
on gentle(r) slopes

3 at 1 mark **[3]**

**(c)** none in (seasonal) swamp
none / few in forest
none / few in bush and scrub
none / few in higher / summits / comparatively high
none / few on steep(er) slopes

3 at 1 mark **[3]**

June 2004

INTERNATIONAL GCSE

# MARK SCHEME

## MAXIMUM MARK: 60

## SYLLABUS/COMPONENT: 0460/04

## Geography
## Paper 4

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**Question 1**

**(a) (i)** **I** Ink will not be removed when raining
**II** allows accurate reading of rainfall/equal volume — 2 @ 1 mark **[2]**

**(ii)** Must be two different factors e.g.
Away from buildings/away from trees/ in an open area; off the ground so no splash;
away from people/not near where it can be knocked;
sunken in ground for stability; on flat land; — 2 @ 1 mark **[2]**

**(b) (i)** Complete graph by marks at 12mm (airport) and 9mm (school) on Fig. 2 — 2 @ 1 mark **[2]**

**(ii)** Any two comments e.g. on rain days six were under 5mm; two days of higher rainfall; six days of no rainfall recorded
*Credit only number of readings or when* — 2 @ 1 mark **[2]**

**(iii)** 49/14 = 3.5mm in Table 1 — 1 @ 1 mark **[1]**

**(iv)** Must be comparative statements
e.g. less days with no rainfall at airport;
higher max rainfall recorded at airport; higher total;
higher daily average rainfall at airport etc. — 2 @ 1 mark **[2]**

**(v)** **I** Higher altitude brings more rainfall; explanation of concept (e.g. cools, condense and rains)

**II** closer to the sea increases rainfall; explanation of concept (moist winds brought onshore and rising over land) or explanation of rain shadow

for each idea one mark for simple statement and second mark for development **[4]**

**(c) (i)** pointer indicates the direction the wind is blowing **from**; the plate aids the turning of the pointer — 2 @ 1 mark **[2]**

**(ii)** 3 days from north at school

2 days from north at airport

3 @ 1 mark
1 for each correct length
1 for appropriate width/overall presentation **[3]**

**(d)** Suggestion SW or S;
Using the data as evidence e.g. Day 7 and 8 have higher rainfall at both locations from S/SW winds etc.

4 @ 1 mark
max 1 no data
res 1 suggestion **[4]**

**(e)** e.g.
First part of hypothesis correct; Rainfall closer to the sea is greater; airport has higher total rainfall; 49 compared to 30;
Hypothesis of winds blowing from S is partly correct;
S and SW winds produce rainfall days e.g. days 7/8;
Standardised rain gauge v home made rain gauge;
Data only collected over 14 days/may not be representative
Students may have misread wind direction; winds may have changed during day; Day 11 at school error?

6 @ 1 mark

res 1 for hypothesis
res 1 for evaluation
res 1 for student error

Max 4 if no data **[6]**

**Total 30 Marks**

**Question 2**

**(a) (i)** no age/gender bias; representative sample — 1 @ 1 mark **[1]**

**(ii)** not because it is 'random' or 'systematic' on own
extra information may help analysis; maybe different results if repeated; number of people may change during the day; type of people may change during day
accept examples if explained — 2 @ 1 mark **[2]**

**(b) (i)** area around the park;
where people live who visit the park — 2 @ 1 mark **[2]**

*not distance as = range*

**(ii)** people will under estimate/overestimate; time will vary with mode of transport/traffic congestion;
no idea of direction/location; — 1 @ 1 mark **[1]**

**(iii)** "Where do you live?" or equivalent wording — 1 @ 1 mark **[1]**

**(c) (i)** On Fig. 5 similar wording to:-
"How did you travel to the park?"

| | |
|---|---|
| CAR | |
| BUS | |
| WALK | |
| TRAIN | |

1 mark for question
1 mark for transport
1 mark for layout **[3]**

**(ii)** e.g. If most people walked then smaller S.of I than if by public transport etc. — 2 @ 1 mark
credit development **[2]**

**(d) (i)** As overlay of circle
25% = 90° 60% = 216° 15% = 54° — 3 correct angles
1 res title
1 res key
1 res use of key **[6]**

**(ii)** e.g. most people stayed 3 - 6 hours; Only 15%/fewer people stayed over 6 hours etc. — 2 @ 1 mark **[2]**

**(iii)** e.g. Longer stay increases impact;
longer stay increases litter; more trampling; more noise etc *not just 'pollution'*
Only credit environmental impact — 4 @ 1 mark
credit dev of point up to 2 marks **[4]**

**(e) (i)** e.g. Toilets very good facility; Information about the area poor; most people were satisfied with the facilities etc. — 4 @ 1 mark
Either general or specific comment
list = no marks **[4]**

**(ii)** Put up more footpath signs; include more information boards; — 2 @ 1 mark **[2]**

Credit only realistic and specific suggestions

**Total 30 marks**