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CAMBRIDGE
International Education

Cambridge IGCSE™

ENVIRONMENTAL MANAGEMENT **0680/23**

Paper 2 Management in Context **October/November 2025**

MARK SCHEME

Maximum Mark: 80

Published

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.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the October/November 2025 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

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Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptions for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

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GENERIC MARKING PRINCIPLE 5: Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).
GENERIC MARKING PRINCIPLE 6: Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

Science-Specific Marking Principles

1	Examiners should consider the context and scientific use of any keywords when awarding marks. Although keywords may be present, marks should not be awarded if the keywords are used incorrectly.
2	The examiner should not choose between contradictory statements given in the same question part, and credit should not be awarded for any correct statement that is contradicted within the same question part. Wrong science that is irrelevant to the question should be ignored.
3	Although spellings do not have to be correct, spellings of syllabus terms must allow for clear and unambiguous separation from other syllabus terms with which they may be confused (e.g. ethane / ethene, glucagon / glycogen, refraction / reflection).
4	The error carried forward (ecf) principle should be applied, where appropriate. If an incorrect answer is subsequently used in a scientifically correct way, the candidate should be awarded these subsequent marking points. Further guidance will be included in the mark scheme where necessary and any exceptions to this general principle will be noted.
5	<u>'List rule' guidance</u> For questions that require ***n*** responses (e.g. State **two** reasons …): • The response should be read as continuous prose, even when numbered answer spaces are provided. • Any response marked *ignore* in the mark scheme should not count towards ***n***. • Incorrect responses should not be awarded credit but will still count towards ***n***. • Read the entire response to check for any responses that contradict those that would otherwise be credited. Credit should **not** be awarded for any responses that are contradicted within the rest of the response. Where two responses contradict one another, this should be treated as a single incorrect response. • Non-contradictory responses after the first ***n*** responses may be ignored even if they include incorrect science.

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6 Calculation specific guidance

Correct answers to calculations should be given full credit even if there is no working or incorrect working, **unless** the question states 'show your working'.

For questions in which the number of significant figures required is not stated, credit should be awarded for correct answers when rounded by the examiner to the number of significant figures given in the mark scheme. This may not apply to measured values.

For answers given in standard form (e.g. $a \times 10^n$) in which the convention of restricting the value of the coefficient (a) to a value between 1 and 10 is not followed, credit may still be awarded if the answer can be converted to the answer given in the mark scheme.

Unless a separate mark is given for a unit, a missing or incorrect unit will normally mean that the final calculation mark is not awarded. Exceptions to this general principle will be noted in the mark scheme.

7 Guidance for chemical equations

Multiples / fractions of coefficients used in chemical equations are acceptable unless stated otherwise in the mark scheme.

State symbols given in an equation should be ignored unless asked for in the question or stated otherwise in the mark scheme.

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Annotations guidance for centres

Examiners use a system of annotations as a shorthand for communicating their marking decisions to one another. Examiners are trained during the standardisation process on how and when to use annotations. The purpose of annotations is to inform the standard isation and monitoring processes and guide the supervising examiners when they are checking the work of examiners within their team. The meaning of annotations and how they are used is specific to each component and is understood by all examiners who mark the component.

We publish annotations in our mark schemes to help centres understand the annotations they may see on copies of scripts. Note that there may not be a direct correlation between the number of annotations on a script and the mark awarded. Similarly, the use of an annotation may not be an indication of the quality of the response.

The annotations listed below were available to examiners marking this component in this series.

Annotations

Annotation	Meaning
	correct point or mark awarded
	incorrect point or mark not awarded
	information missing or insufficient for credit
	incorrect or insufficient point ignored while marking the rest of the response
	contradiction in response, mark not awarded
	benefit of the doubt given
	error carried forward applied
	First answer
	response has not answered question
	power of ten error

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Annotation	Meaning
SEEN	point has been noted, but no credit has been given or blank page seen
TV	response is too vague or there is insufficient detail in response
REP	repetition in response
	to show a correct point but where the number of points does not relate to the number of marks i.e. 3 correct= 2 marks
	correct awarding one mark from marking point or marking group 1. similar numbered ticks are used for marking point or marking groups 2, 3, 4 etc.
Highlighter	Highlight

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Question	Answer	Marks
1(a)(i)	29.79 / 29.8 / 30;	**1**
1(a)(ii)	**M1** axis label: age; **M2** bars correctly plotted males 4.0% and females 3.8%;	**2**
1(b)	*any four from:* **M1** people cannot access health care / cannot access medicine; **M2** (cost of health care leads to) greater mortality / reduced life expectancy / increase infant mortality/higher death rates; **M3** poor diet leads to health problems; **M4** people cannot afford contraception/birth control; **M5** (cost of contraception leads to) larger families; **M6** (larger families leads to) less access to education for females; **M7** people have larger families/high birth rate (so children work in family business); **M8** people have to, work longer / start working earlier; **M9** no pensions / no care for the elderly; **M10** overcrowding;	**4**
1(c)(i)	**M1** *axes labels:* *x*-axis: mine AND *y*-axis: (annual) production **AND** unit: million tonnes; **M2** suitable linear scale so that data covers at least half the available space; **M3** correct plotting ± half a small square tolerance; **M4** bars of equal width;	**4**
1(c)(ii)	3.0 circled;	**1**
1(d)(i)	2015; 2016 **AND** 2017;	**2**
1(d)(ii)	**M1** 53.1 – 35.0 / 18.1; **M2** 34.1 ;	**2**

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Question	Answer	Marks
1(e)	*any two from:* **M1** cheaper to mine than recover gold; **M2** difficult to collect e-waste; **M3** difficult to separate other material in e-waste; **M4** amount of energy required; **M5** labour intensive/ time consuming; **M6** limited technology / lack of facilities/ equipment / knowledge, to separate gold;	**2**
1(f)	surface / open (cast or pit);	**1**
1(g)(i)	*any three from:* **M1** mercury absorbed by plants; **M2** plants eaten by fish; **M3** (mercury) not excreted / accumulates faster, than excreted; **M4** small fish eaten by big fish; **M5** levels of mercury <u>increase</u> up food chain;	**3**
1(g)(ii)	*any two from:* **M1** creates waste plastic; **M3** water pollution qualified eg contains microplastics / nurdles / forever chemicals; **M3** animals harmed qualified eg eat plastic / suffocation; **M4** enter food chain / bioaccumulation; **M5** emissions due to transport; **M6** energy requirements for production of plastics;	**2**
1(g)(iii)	*any one from:* **M1** laws not enforced; **M2** no monitoring; **M3** low fines;	**1**

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Question	Answer	Marks
1(h)(i)	***M1 question heading*:** question one **OR** Do you think paying a fine will stop river contamination in the future? **AND** question two **OR** Do you think the mine should be closed? ; ***M2 response heading*:** yes **AND** no **AND** do not know;	**2**
1(h)(ii)	**M1** *use of random method for selecting* e.g. number generator / names in a hat / postcode / addresses; **M2** *use of systematic method for selecting* e.g. every nth house or person;	**2**
1(i)	*any three from:* **M1** idea of preserving habitat / controls loss of habitat; **M2** restrict human access or activities; **M3** ban on hunting; **M4** (enforce) laws; **M5** park rangers / monitoring; **M6** scientific research;	**3**

Question	Answer	Marks
2(a)(i)	**M1** water moves from high to low / downhill; **M2** (water) turns / spins / rotates the turbines; **M3** the turbines turns / spins/rotates the generators;	**3**
2(a)(ii)	*any one from:* **M1** economic benefit/ gain money / foreign exchange; **M2** keeps cost of electricity down in Argentina; **M3** export helps pay for development or stated project;	**1**

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Question	Answer	Marks
2(b)	*any one from:* **M1** remote area; **M2** sparse / low population; **M3** low demand; **M4** idea of other method of providing local electricity e,g. wind power;	**1**
2(c)	*any two from:* **M1** employment ; **M2** recreational / tourism; **M3** fishing; **M4** reduced cost of flood damage; **M5** water for irrigation;	**2**
2(d)	*any three from:* **M1** soil erosion ; **M2** kills/damages/loss of crops, yields (plants) / water logging ; **M3** kills soil organisms ; **M4** drowning of livestock ; **M5** more fertile soil / deposition of silt / increase minerals or fertility ; ORA **M6** damage to farm buildings ;	**3**
2(e)	*any three from:* *in 2001:* **M1** lower total energy generation / consumption; **M2** more hydro-electric; **M3** less wind; **M4** description of change in proportion of fossil fuels to renewables; **M5** less nuclear; **M6** less fossil fuels; **M7** comparative data quote;	**3**

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Question	Answer	Marks
3(a)(i)	*any two from:* **M1** kills / harms, other species / non target species; **M2** kills / harms natural predators; **M3** can create pest resistance / resurgence; **M4** loss of biodiversity;	**2**
3(a)(ii)	*any two from* **M1** more monitoring of pest; **M2** prevents spread of pest form one country to another; **M3** reduced chance of serious outbreak; **M4** idea of sharing of expertise;	**2**
3(b)(i)	2019;	**1**
3(b)(ii)	Allow range from 500 to 510;	**1**
3(b)(iii)	*any one from:* **M1** to see the correlation; **M2** evens out fluctuations / ignores anomalies / ignores outliers; **M3** identifies there is an overall increase;	**1**
3(b)(iv)	*any three from:* **M1** fertiliser; **M2** herbicides; **M3** biological control; **M4** fungicide; **M5** (better) irrigation; **M6** GM crop;	**3**

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Question	Answer	Marks
4(a)	*any three from:* **M1** food shortages / lack of food production; **M2** increased cost of food ; **M3** loss of income for farmers; **M4** loss of export;	**3**
4(b)(i)	**M1** high; **M2** pressure;	**2**
4(b)(ii)	*any four from:* **M1** water conservation / use less water / stated example eg rationing or use of grey water; **M2** store more water / stated example eg use of small dams; **M3** monitor water supply / use of water meters; **M4** transfer water from other sources; **M5** use of drought resistance crops; **M6** use of trickle or drip irrigation / apply water directly to base of plant; **M7** desalination of sea water; **M8** international aid; **M9** emergency water supplies;	**4**

Question	Answer	Marks
5(a)(i)	*any four from:* **M1** dig hole and insert container; **M2** container has small hole in base / drainage system at base; **M3** place lid / cover the trap; **M4** lid raised at the sides; **M5** identify / count beetles; **M6** release beetles;	**4**
5(a)(ii)	**M1** more different <u>species</u> in natural vegetation ; **M2** higher total <u>number</u> in natural vegetation ;	**2**

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Question	Answer	Marks
5(a)(iii)	*any two from:* **M1** sample more areas; **M2** sample at different times of the year; **M3** sample for longer period of time / leave the pitfall traps for more than 24 hrs;	**2**
5(b)(i)	**M1** 311.5 ; **M2** 311 / 312 ;	**2**
5(b)(ii)	only whole animals are possible / cannot have half a beetle ;	**1**
5(c)(i)	*any three from:* **M1** beetle feeds on pollen; **M2** pollen lands on the body of the beetle; **M3** deposits on the stigma;	**3**
5(c)(ii)	**M1** year 6 or 7 or 8; **M2** (after year 8) the population increased each year / started to grow;	**2**

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