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CAMBRIDGE
International Education

Cambridge IGCSE™

ENVIRONMENTAL MANAGEMENT **0680/22**

Paper 2 Management in Context **February/March 2026**

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 February/March 2026 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 standardisation 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)	*any three from:* **M1** spread out / dispersed (across the country) ; **M2** along / near the coast ; **M3** along / near, rivers ; **M4** inland ; **M5** (more in) east / fewer in west ; **M6** (more in) north / fewer in south ; **M7** none near, Paris / capital city/ more south of Paris ;	**3**
1(a)(ii)	*any one from:* **M1** supply of water ; **M2** supply of fuel ; **M3** (for ease of) distribution / accessibility / transport ; **M4** low population density ; **M5** availability of land ;	**1**
1(b)	*any three from:* **M1** (fuel is) uranium ; **M2** (the heat or energy generated), boils water / (water) forms steam ; **M3** (blades of) turbine turns / rotates ; **M4** (turbine causes) generator turns / rotates ;	**3**
1(c)(i)	fuel / uranium, is finite ;	**1**
1(c)(ii)	*any two from:* **M1** biofuel / bioethanol / biogas / biomass ; **M2** geothermal ; **M3** hydro-electric / HEP; **M4** tidal ; **M5** wave ; **M6** solar ; **M7** wind ;	**2**

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Question	Answer	Marks
1(d)(i)	*any two from:* **M1** loss of habitat / deforestation / land clearance ; **M2** loss of biodiversity ; **M3** water pollution ; **M4** greenhouse / water vapour, emissions ; **M5** leakage, from storage tanks / of radioactive waste / radiation ; **M6** noise pollution ;	**2**
1(d)(ii)	*any two from:* **M1** does not emit carbon dioxide / carbon neutral / ORA ; **M2** low or no NO_x / no SO_2 / less risk of acid rain / ORA ; **M3** reduces reliance on, fossil fuels ; **M4** energy dense / generates a large, supply of electricity / energy / ORA ; **M5** doesn't needs frequent refuelling / ORA ;	**2**
1(d)(iii)	*any two from:* **M1 stated** cost e.g. construction / labour / maintenance / decommissioning / waste processing ; **M2** idea of hazardous waste / disposal is difficult ; **M3** people do not want to live near nuclear power stations / public opposition ; **M4** not all countries have uranium ;	**2**
1(e)(i)	*any three from:* **M1** renewable starts higher (in 1970) / nuclear ends higher (in 2020) / ORA ; **M2** renewable, stable / very little change / constant ; **M3** nuclear / renewable / both, increase **/** nuclear increases the most / nuclear increases rapidly / ORA ; **M4** nuclear, levels off ; **M5** nuclear / renewable / both, fluctuate ; **M6** 1980 or 1981, same percentage (for nuclear and renewable) ;	**3**

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Question	Answer	Marks
1(e)(ii)	*any one from support:* **M1** nuclear is higher (than renewables) ; *any one from does not support:* **M2** data about contribution from other resources are not included / from stated resource e.g. from fossil fuels ; **M3** nuclear is only 36% ; **M4** data in graph only shows 51% (of total generation) ; **M5** 49% (of total generation) is not accounted for ; **M6** non-renewables not shown / fossil fuels not shown ; **M7** data ends in 2020 / data is not current ; **M8** nuclear decreasing (from 2015 to 2020) ; **M9** data fluctuates ;	**2**

Question	Answer	Marks
2(a)	**M1** 153 906 ÷ 643 801 / 23.9(058) ; **M2** 24(%) / correct rounding of **M1** ;	**2**

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Question	Answer	Marks
2(b)(i)	*any five from:* *uses random sampling* **M1** grid area / use of coordinates ; **M2** random method described e.g. number generator ; *collects the data* **M3** quadrat described e.g. 1 m^2 frame ; **M4** minimum of 5 quadrats ; **M5** count the number of salamanders (in the quadrat) ; *records the data collected* **M6** record results, in a table / using a tally system ; *obtains an estimate* **M7** stated repetition e.g. entire investigation / larger sample / different time of year ; **M8** calculate mean ; **M9** scale up described: mean per m^2 × total area / mean per quadrat × total number of quadrats ;	**5**
2(b)(ii)	*any two from:* **M1** idea of salamanders being hard to find e.g. hidden / camouflaged / not visible / hard to see ; **M2** quadrats may not be representative (in a large area) ; **M3** population may be seasonal ; **M4** salamanders may only be active at a certain time of day ; **M5** risk of miscount / counting twice ; **M6** time consuming / labour intensive ;	**2**
2(b)(iii)	*any two from:* **M1** temperature too hot or too cold / not suitable temperature / not optimum temperature ; **M2** increased risk of wildfires ; **M3** shortage of a water source / drought ; **M4** less food available / food chain disrupted ; **M5** risk of invasive species ; **M6** increased risk of disease ; **M7** loss of habitat ;	**2**

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Question	Answer	Marks
2(b)(iv)	*any three from:* **M1** (salamanders) from different, populations / areas / genetic stock ; **M2** provide suitable conditions / provide food / remove predators / treat disease / no hunting ; **M3** (after breeding) release (young) back into the wild ; **M4** release into new areas ;	**3**
2(b)(v)	*any three from:* **M1** conserve habitat / create, national parks / wildlife reserves / corridors / biosphere reserves / protected areas / extractive reserve ; **M2** remove, invasive species ; **M3** stated legislation example e.g. stop, hunting / pet trade / illegal capture ; **M4** limit tourism ; **M5** zoos ; **M6** education / awareness / research / monitoring of numbers ;	**3**

Question	Answer	Marks
3(a)(i)	*bar chart with:* **M1** axes labels: *x*-axis: packaging material or type of packaging **and** materials *y*-axis: percentage or % (recycled) ; **M2** correct plotting of bar for metal 82 ± half a small square tolerance ; **M3** bar of same width **and** drawn with ruler ;	**3**
3(a)(ii)	**M1** 68.75 ; **M2** 69 ;	**2**

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Question	Answer	Marks
3(a)(iii)	*any two from:* **M1** insufficient recycling, facilities / collection ; **M2** difficult to recycle / some plastics can't be recycled ; **M3** too costly to recycle / cheaper to produce new items ; **M4** raw materials still available ; **M5** lack of public, interest / understanding ; **M6** limit to number of times an item can be recycled / plastic items reused / some plastics are biodegradable ; **M7** other disposal methods, exist / are easier ;	**2**
3(b)(i)	*benefits (max **3**):* **M1** job opportunities ; **M2** stated economic benefit e.g. improves (local) economy ; **M3** (improved) infrastructure or stated example named e.g. transport / roads / healthcare ; *negative impacts (max **3**):* **M4** air / water / noise / visual, pollution ; **M5** stated health impact from stated source e.g. respiratory problems from dust / traffic ; **M6** loss of land or stated example: recreational spaces / habitats / deforestation / farmland ; **M7** loss of biodiversity ; **M8** increased traffic / congestion ; **M9** displacement of people ;	**4**
3(b)(ii)	*any three from:* **M1** fill in hole with overburden ; **M2** replace (top)soil ; **M3** bioremediation / use microbes ; **M4** improve soil / remove toxic chemicals ; **M5** plant, trees / vegetation ;	**3**

Question	Answer	Marks
4(a)(i)	(capture of) non-target species / other fish species / unwanted catch ;	**1**

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Question	Answer	Marks
4(a)(ii)	*any two from:* **M1** bycatch dies / fish stocks, of bycatch / non-target species reduced ; **M2** disrupts food chain / reduces, prey / food for other fish ; **M3** idea that not enough adults of reproductive age / idea of catching juveniles / reduction in breeding ;	**2**
4(a)(iii)	*any two from:* **M1** risk of overfishing ; **M2** habitat destruction / damage to sea bed ; **M3** seaweed removed ; **M4** coral, damaged or killed ; **M5** nets lost and lead to unplanned fish catch ; **M6** potential oil spills from boat ; **M7** carbon dioxide emissions from boat ;	**2**
4(a)(iv)	*any three from:* **M1** higher fish populations ; **M2** shallow water / light can easily penetrate / warm water ; **M3** upwelling / cold water comes to (near) surface ; **M4** nutrient rich / greater availability of phytoplankton / more food for fish ; **M5** not too deep to fish ; **M6** near to port ;	**3**
4(b)(i)	*any two from:* **M1** near a source of water / on the coast ; **M2** near a source of food ; **M3** waste can be disposed of easily ; **M4** road links / easier access / less transportation / ease of export ; **M5** land available / large area of land / flat terrain / suitable terrain ;	**2**

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Question	Answer	Marks
4(b)(ii)	*any two benefits:* **M1** no bycatch / no need to catch wild turbot / conserves wild turbot ; **M2** turbot can be harvested all year round / no seasons / guaranteed harvest ; **M3** fast growth rates / increased yield / increased supply / increase in food for humans ; **M4** no quotas ; **M5** stated economic benefit e.g. export / job opportunities ; *any two limitations:* **M6** (fish) food needed ; **M7** disrupts food chains ; **M8** waste must be disposed of ; **M9** risk of disease (to wild turbot) ; **M10** requires infrastructure ; **M11** requires specialist knowledge or skills / monitoring ; **M12** requires large area of land ;	**4**
4(c)	*mesh size: (max **2**)* **M1** juvenile fish pass through mesh / only mature fish are caught ; **M2** more fish survive to breeding age ; **M3** reduction in bycatch ; *closed seasons: (max **2**)* **M4** no catches allowed during closed season ; **M5** fish allowed to breed ; **M6** gives times for juveniles to grow ;	**3**

Question	Answer	Marks
5(a)(i)	1984 ;	**1**
5(a)(ii)	**M1** wheat is greater / potatoes is lower ; **M2** comparative data quote e.g. wheat is 8 compared to potatoes 4 tonnes ;	**2**
5(a)(iii)	no data for area (planted) / only data for (mean) yield per hectare ;	**1**

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Question	Answer	Marks
5(b)(i)	*any two from:* **M1** provide, mineral ions / nitrate / NO_3^- / phosphate / PO_4^{3-} / potassium / K^+ ; **M2** improves soil fertility ; **M3** allows greater growth (rate) / more crops grown in a set, time / area ;	**2**
5(b)(ii)	**M1** kill, weeds / unwanted / competing plants ; **M2** reduces competition for a named resource e.g. light / mineral ions / space / water ;	**2**
5(c)	*any three from:* **M1** waterlogging ; **M2** less oxygen in soil / roots cannot get oxygen ; **M3** salinisation / salts accumulate in the soil or on surface ; **M4** soil erosion / desertification / soil capping / water transports soil particles away ; **M5** leaching (of nutrients) / runoff / fertilisers or chemicals washed into rivers ; **M6** water sources / rivers / dams / aquifers, become depleted ;	**3**

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