2 The pie charts show data about the cause of death for men and women in the UK in 2012.



(b) State two lifestyle factors that increase a person's risk of developing cardiovascular disease.



- 4
- (a) Which scientists developed the theory of evolution by natural selection?

Tick	( 🗸 )	one	box.
	· ·		

Charles Darwin and Alfred Russel Wallace.

Charles Darwin and Gregor Mendel.

Gregor Mendel and Alfred Russel Wallace.

[1]

[4]

(b) Rats are considered a pest to many farmers as they eat their crops.

A chemical called warfarin can be used to kill rats.

Put statements A to E in the correct order to describe why many rats are no longer killed by warfarin.

A A mutation gave some rats resistance to warfarin. B

More rats became resistant to warfarin over time. C

E The allele for resistance was passed to offspring tesale. Write one letter in each box. From 9 of 56

(c) Warfarin prevents blood clotting.

What is the role of red blood cells?

......[1]

**9** The normal range for a dog's body temperature is between 38.3 °C and 39.2 °C.

Vets suggest that owners measure their dog's temperature so that they are aware of their dog's normal body temperature.

(a) Why would it be helpful to know what their dog's normal body temperature is?

.....[1]

- (b)
- (i) An owner measures their dog's temperature 3 times.

	Temperature (°C)
1	38.7
2	38.9
3	38.7

Calculate the mean body temperature.

	Give your answer to 1 decimal place.	K
(ii)	Why is a subside to measure the Case emperature a few times and then calculate the	°C <b>[3]</b> he mean?
		[1]

**11** The diagram shows the feeding relationships of some of the organisms that live in an Arctic ecosystem.



[1]

(iii) A student calculates the surface area and volume of an egg.

Surface area of the egg = 67.5

 $cm^2$  Volume of the egg = 50 cm<sup>3</sup>

Show that the surface area to volume ratio of the egg is 1.35 : 1.

### **END OF QUESTION PAPER**

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## MARKING INSTRUCTIONS

## PREPARATION FOR MARKING

## **RM ASSESSOR**

- co.uk Make sure that you have accessed and completed the relevan Gaining packages for on-screen marking: *RM Assessor Online Training*; *OCR Essential Guide to Marking*. 1.
- entropy and the question paper for this unit. These are available in RM Assessor. 2. Make sure that you have read ders odd the mark
- 3. echumber of practice responses ("scripts") and the required number of Loa-in to RM

# MARKING

- Mark strictly to the mark scheme. 1.
- 2. Marks awarded must relate directly to the marking criteria.
- 3. The schedule of dates is very important. It is essential that you meet the RM Assessor 50% and 100% (traditional 50% Batch 1 and 100% Batch 2) deadlines. If you experience problems, you must contact your Team Leader (Supervisor) without delay.
- 4. If you are in any doubt about applying the mark scheme, consult your Team Leader by telephone, email or via the RM Assessor messaging system.

### 5. **Crossed Out Responses**

Where a candidate has crossed out a response and provided a clear alternative then the crossed out response is not marked. Where no alternative response has been provided, examiners may give candidates the benefit of the doubt and mark the crossed out response where legible.

# **Rubric Error Responses – Optional Questions**

Where candidates have a choice of question across a whole paper or a whole section and have provided more answers than required, then all responses are marked and the highest mark allowable within the rubric is given. Enter a mark for each question answered into RM assessor, which will select the highest mark from those awarded. (The underlying assumption is that the candidate has penalised themselves

by attempting more questions than necessary in the time allowed.) Multiple Choice Question Responses When a multiple choice question has only to be correct response and a candidate provides two responses (even if one of these responses is correct. is correct), then no mark should be a wirded (as it is not be to determine which was the first response selected by the candidate). When a question requires and dates to select min one option/multiple options, then local marking arrangements need to ensure consistency of a proach.

# **Contradictory Responses**

When a candidate provides contradictory responses, then no mark should be awarded, even if one of the answers is correct.

# Short Answer Questions (requiring only a list by way of a response, usually worth only **one mark per response**)

Where candidates are required to provide a set number of short answer responses then only the set number of responses should be marked. The response space should be marked from left to right on each line and then line by line until the required number of responses have been considered. The remaining responses should not then be marked. Examiners will have to apply judgement as to whether a 'second response' on a line is a development of the 'first response', rather than a separate, discrete response. (The underlying assumption is that the candidate is attempting to hedge their bets and therefore getting undue benefit rather than engaging with the guestion and giving the most relevant/correct responses.)

# Short Answer Questions (requiring a more developed response, worth two or more marks)

If the candidates are required to provide a description of, say, three items or factors and four items or factors are provided, then mark on a similar basis - that is downwards (as it is unlikely in this situation that a candidate will provide more than one response in each section of the response space.)

### Subject-specific Marking Instructions 13.

# INTRODUCTION

Your first task as an Examiner is to become thoroughly familiar with the material of which the examination depends. This material includes: • the specification, especially the assessment objectives • the question paper • the mark scheme • the mark scheme

You should ensure also that you are familiar with the administrative procedures related to the marking process. These are set out in the OCR booklet Instructions for Examiners. If you are examining for the first time, please read carefully Appendix 5 Introduction to Script Marking: Notes for New Examiners.

Please ask for help or guidance whenever you need it. Your first point of contact is your Team Leader.