**Reproducing (answers)**

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| Instructions to students  • You have 50 minutes to complete the test.  • Please answer all questions in the spaces provided.  • There is to be no talking during the test. | Marks  Section I: Multiple-choice questions: 5 marks  Section II: Short-answer questions: 16 marks  Section III: Extended-response questions: 4 marks  Total: 25 marks |

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| Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Score: /25  Grade: % |
| Comments: | |

Section I: Multiple-choice questions

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| For each question, circle or highlight the correct answer.  1 Vegetative reproduction is: | |  |
| A | asexual reproduction in plants. |
| B | biodiversity of plants. |
| C | selective breeding of plants. |
| D | sexual reproduction in plants. |
| 2 The function of the placenta is to: | | |
| A | dilate the cervix during labour. | |
| B | break down the endometrial lining if fertilisation has not occurred. | |
| C | allow oxygen and nutrients to pass from the mother to the developing foetus. | |
| D | store sperm until they mature and then release them into the vas deferens. | |
| 3 The process where an egg matures and is released from the ovary is called: | | |
| A | ovulation. | |
| B | fertilisation. | |
| C | menstruation. | |
| D | gestation. | |

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| 4 Assisted reproductive technology (ART) procedures include: | |
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| A | in-vitro fertilisation and immunisation. |
| B | organ transplant and dialysis. |
| C | in-vitro fertilisation and amniotic testing. |
| D | amniotic testing and X-ray. |
| 5 Which one of the following is not a form of asexual reproduction? | |
| A | Binary fission |
| B | Fertilisation |
| C | Parthenogenesis |
| D | Fragmentation |

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|  | Section I  Total marks:  /5 marks |

Section II: Short-answer questions

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| 6 Label parts A–E in the diagram of the female reproductive system below. | | |
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| 1 mark for each correct answer:  A – fallopian tube  B – ovary  C – ovum  D – uterus  E – vagina | | |
|  | | /5 marks |
| 7 What is the difference between self-pollination and cross-pollination? | | |
| Self-pollination involves pollen from a flower landing on its own stigma or that of another flower on the same plant (1 mark). Cross-pollination occurs when pollen from a flower lands on the stigma of a flower on a different plant, producing greater variation (1 mark). | | |
|  | /2 marks | |
| 8 Describe selective breeding. Give an example of why we would do this. | | |
| Students’ answers will vary. For example:  Selective breeding is the breeding of chosen individuals of a species that are selected by humans based on particular traits (1 mark). We do this so that we can keep, lose or enhance characteristics in the offspring (1 mark). For example, a farmer might want a greater amount of wool from his sheep, and so breeds only the woolliest sheep (1 mark). | | |
|  | /3 marks | |
| 9 Explain why the testes are located within the scrotum in most animals | | |
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| The testes contain sperm, which need to be kept cooler than 37°C / inside the body (1 mark). If sperm get too hot they are unable to fertilise an egg properly (1 mark) | | |
|  | /2 marks | |
| 10 Identify two differences between sexual and asexual reproduction. | | |
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| Any two differences described. 1 mark for each correct difference. For example:  • Sexual reproduction involves the fusion of gametes while asexual reproduction does not.  • Sexual reproduction requires two parents while asexual only requires one.  • Asexual reproduction produces offspring with exactly the same genetic material whereas sexual reproduction produces variation in offspring. | | |
|  | /2 marks | |
| 11 Explain why inbreeding of animals in captivity is a problem and suggest one way in which it can be prevented. | | |
| Inbreeding increases the chances of rare inherited diseases in the offspring (1 mark). Inbreeding can be prevented through contraception / selective breeding (1 mark). | | |
|  | /2 marks | |
|  | Section II  Total marks:  /16 marks | |

Section III: Extended-response questions

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| 12 Compare and contrast the reproduction of the three types of mammals – placental (e.g. humans), marsupial (e.g. koalas) and monotremes (e.g. platypus). | |
| Students’ answers will vary. For example:  Internal fertilisation of the egg by sperm happens with all three types of mammals (1 mark). However, monotremes lay eggs (1 mark); marsupials give birth to an undeveloped foetus that finishes developing in the mother’s pouch (1 mark); and placental mammals develop in a womb nourished by a placenta, which provides oxygen and nutrients to the foetus (1 mark). | |
|  | /4 marks |
|  | Section III  Total marks:  /4 marks |