

## **GCSE Biology A (Gateway)**

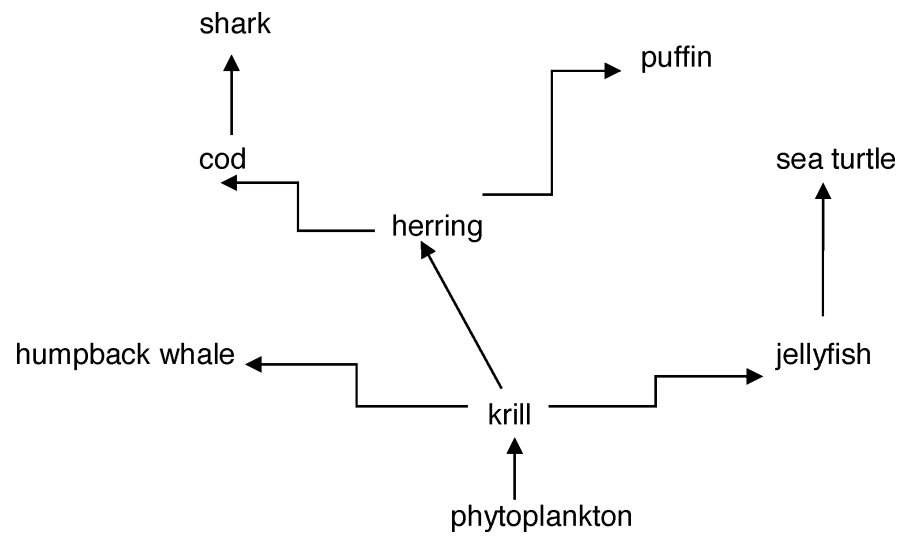
**J247/02** B4-B6 and B7 Foundation (Foundation Tier)

### **Question Set 2**

Multiple Choice Questions

B5: Genes, Inheritance and Selection

1. The diagram shows a food web.



What is the most likely effect on the food web, if the number of cod decreases?

- A An increase in the number of herrings
- B An increase in the number of krill
- C An increase in the number of sharks
- D No effect on the population of puffins

Your answer

[1]

2. What are the names of the two scientists who first suggested the theory of natural selection?

- A Darwin and Mendel
- B Mendel and Wallace
- C Wallace and Darwin
- D Watson and Crick

Your answer

[1]

3. New drugs are tested on humans, animals and tissues. Which order is used when tested?

- A Animals – tissues – humans
- B Humans – animals – tissues
- C Tissues – animals – humans
- D Tissues – humans – animals

Your answer

[1]

4. There are two main types of reproduction, sexual and asexual.

Which is an advantage of sexual reproduction?

- A Creates more variation
- B Produces larger numbers of offspring
- C Produces offspring that are all identical so well adapted
- D Only needs one parent

Your answer

[1]

5. What did Gregor Mendel discover?

- A A theory for how life on Earth started
- B How characteristics are inherited in pea plants
- C The shape of the DNA molecule
- D The theory of natural selection

Your answer

[1]

6. Strains of bacteria are now becoming resistant to antibiotics.

Which process is causing this resistance?

- A Genetic modification
- B Natural classification
- C Natural selection
- D Selective breeding

[1]

Your answer

7. An organism has the genotype TT.

Which term describes this organism?

- A Heterozygous dominant
- B Heterozygous recessive
- C Homozygous dominant
- D Homozygous recessive

[1]

Your answer

8. Which process produces gametes?

- A Diffusion
- B Fertilisation
- C Meiosis
- D Mitosis

Your answer

[1]

9. Which combination of gametes will produce a **male** baby?
- A A sperm with **XY** chromosomes and an egg with **XX** chromosomes.
  - B A sperm with one **X** chromosome and an egg with one **Y** chromosome.
  - C A sperm with one **Y** chromosome and an egg with one **X** chromosome.
  - D A sperm with **XX** chromosomes and an egg with **XY** chromosomes.

Your answer

[1]

10. Which of these is an example of discontinuous variation?
- A Body weight
  - B Hand span
  - C Height
  - D Sex

Your answer

[1]

11. Cystic fibrosis is a genetic condition caused by a recessive allele (f).

Which is the genotype of a person with cystic fibrosis?

- A Heterozygous and ff
- B Heterozygous and Ff
- C Homozygous and ff
- D Homozygous and FF

Your answer

[1]

**12.** Each cell in the eye of a kangaroo has **16** chromosomes.

How many chromosomes are there in one kangaroo **sperm cell**?

**A** 4

**B** 8

**C** 16

**D** 32

Your answer

**[1]**

**Total Marks for Question Set 2: 12**

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