

AQA, OCR, Edexcel

GCSE Science

GCSE Biology

Inherited Disorders Answers

Name:

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Total Marks: /18

Q1: What is an inherited disorder?

A= Condition passed down from parents to child.

(1 mark)

Q2: What is polydactyl?

A= 1 mark for each of the following:

- Inherited disorder
- Born with extra fingers/ toes

(2 marks)

Q3: Polydactyl is a heterozygous condition. What does this mean?

A= Accept one of the following:

- 50% chance of passing on
- Half gametes contain the faulty gene

(2 marks)

Q4: Explain why parents can be carriers of the cystic fibrosis gene but not have the condition themselves.

A= 1 mark for each of the following:

- Recessive condition/ allele
- Both parents must pass gene on to offspring
- Parents have a dominant healthy allele/ gene

(3 marks)

Q5: What does cystic fibrosis affect?

A= Disorder of the cell membranes

(1 marks)

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Q6: i) Discuss the genotypes of the potential offspring from cystic fibrosis carrier parents using the genetic diagram below.

Genotype	C	c
C	CC	Cc
c	Cc	cc

A= 1 mark for each of the following:

- 25% Normal
- 50% Carriers
- 25% affected

(3 marks)

ii) What are the limitations of the genetic diagram above?

A= 1 mark for continuous prose and 4 of the following:

- Down to chance
- All could be affected
- None could be affected
- Only offers probability

(5 marks)

Q7: How are scientists working to cure genetic diseases?

A= Genetic engineering

(1 mark)