Practice Question Set For GCSE
**Subject : Biology**
**Paper-1 Topic: B3 Infection and response**

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**Name of the Student**:_____
**Max. Marks : 24 Marks** **Time : 24 Minutes**

Mark Schemes

Q1.

(a) any **one** from:

- not all deaths recorded
- not all causes of deaths recorded

*allow cause may not be known*

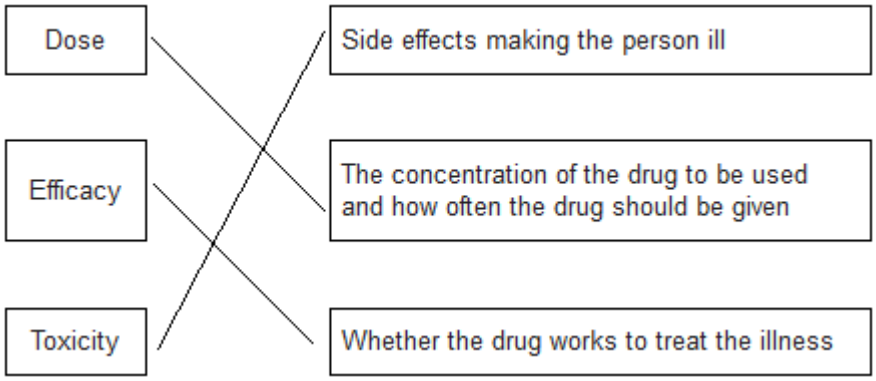
**1**

(b) antibiotics do not kill viruses

*allow antibiotics <u>only</u> kill bacteria*

**1**

(c)




*all correct for **2** marks*
*1 or 2 correct for **1** mark*

**2**

(d) any **one** from:

- to prevent false claims
- to make sure the conclusions are correct / valid
- to avoid bias

**1**

(e) some people would be immune to EVD

*allow those vaccinated would not contract the disease*

**1**

if less people (in a population) have EVD less chance of it being passed on

**1**

(f) **Level 3 (5–6 marks):**
A detailed and coherent evaluation is provided which considers a range of arguments for and

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against the use of unlicensed drugs and comes to a conclusion consistent with the reasoning.

**Level 2 (3–4 marks):**
An attempt to give arguments for and against the use of unlicensed drugs is made. The logic may be inconsistent at times but builds towards a coherent argument.

**Level 1 (1–2 marks):**
Discrete relevant points made. The logic may be unclear and the conclusion, if present, may not be consistent with the reasoning.

**0 marks:**
No relevant content

**Indicative content**

**pros**
- might save some lives
- vaccine could reduce chance of future outbreaks
- patient made aware of risk and agreed to use of drug
- sharing of results could speed up development of effective vaccines / drugs
- used mainly for health workers who were risking their lives to help

**cons**
- could be dangerous
  **or**
  vaccine could harm a healthy person
- goes against legislation / laws governing drug development
- might set a precedent for other drugs not to be fully tested
- unfair as not available to the African people

a justified conclusion

**6**

**[13]**

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Q2.

(a) 0.67(%)

*allow* $0.\dot{6}$ or 0.7

*allow **1** mark for evidence of* $(2 \times 10^6) \div (3 \times 10^8)$

***or***

*allow **1** mark for 0.0067 or 0.6*

**2**

(b) (i) idea that food chains start with plants / producers

*allow food chains do not start with animals **or** larvae are consumers*

**1**

idea that these make food (for other organisms in the chain)

*allow idea that plants / producers photosynthesise **or** plants / producers get energy from the sun*

*allow mosquito larvae do not make food / photosynthesise **or** mosquito larvae do not get energy from the sun*

**1**

(ii) any **four** from:

- reasoned argument for **or** against release
  *must refer to at least one advantage and one disadvantage.*
  *max **3** marks for either only advantages **or** only disadvantages*

advantages:

- fewer mosquitos biting **or** spreading malaria
- fewer people get / die from malaria
  *allow people won't get / die from malaria*
- lower medical costs (for those infected **or** for treatment) **or** less healthcare needed
- better economically for developing / tropical countries.

disadvantages:

- fewer crops reproduce
  *allow fewer crops pollinated*
- poorer crop yield
- possible starvation (of people)
- high cost of GM production / mosquito release
- less food for bats / birds **or** bats / birds die
  *allow disruption to food chain / ecosystem **or** reduction of biodiversity*
- gene could 'escape' into other wildlife / species
  *ignore into plants*

**4**

(iii) any **three** from:

- gene from bacteria cut out
  *allow allele for gene*
- ref to enzymes (anywhere in process)
  *allow at any point in process, ie in cutting or in splicing*
- (gene) transferred to chromosome of mosquito
  *allow DNA for chromosome*
- at an early stage of development
  *allow egg / embryo*

**3**

**[11]**

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