



Discovering and Developing Drugs

1 Where do many of our medications originate from? How has this helped humanity?

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.....

[2 marks]

2 What plant was aspirin originally extracted from? Give two uses of aspirin.

Plant -

1)

2)

[3 marks]

3 A patient with heart failure was taking digitalis. What was digitalis originally extracted from?

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.....

[1 mark]

4 Explain how penicillin was developed

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.....
.....
.....

[3 marks]

5 What does penicillin do and how has this affected the world?

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.....
.....

[2 marks]

6 What do the following terms mean

Efficacy

Toxicity

Dosage

[3 marks]

7 Place the following steps of hypothetical new drug in order

1	The most effective substances are tested on healthy human volunteers, which allows us to determine toxicity and maximum dosage
2	The substances are tested in a laboratory on human cells and tissues
3	The substances are tested on people with the disease, which allows us to check the efficacy of the substance
4	A wild plant used by local tribes is thought to have medicinal properties
5	The substances that prove effective on human cells/tissues are tested in mice
6	Various substances are extracted from the wild plant
7	The results are analysed and published
8	The substances that were effective in mice are tested in rabbits

[8 marks]

8 Why do we test drugs on 2 other mammals before testing in humans?

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[2 mark]

9 Why is a placebo and why do we use them in clinical trials?

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[2 mark]

10 Most clinical trials are blind or double-blind, what does this mean and why is it important?

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.....
.....

[3 mark]

11 Briefly describe stages 1, 2 and 3. Which are clinical or preclinical?

Stage 1

Stage 2

Stage 3

[3 marks]

12 Why do the results of clinical trails need to be peer reviewed and what does it involve?

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.....
.....

[3 mark]

[Total 35 marks]