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1

Which of the following diseases is an example of a non-communicable disease? Tick the correct box:

Influenza

Chicken Pox

Lung cancer

Tetanus

[1 mark]

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2

What non-communicable disease can a substance cause if that substance is carcinogenic?

cancer

[1 mark]

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3

Identify the type of tumour with the correct row in the table (write either **malignant** or **benign** in the table below:

Tumour type	can cause health problems	can spread	can invade other tissues	can continue to divide by cell division
malignant	Y	Y	Y	Y
benign	N	N	N	Y

[1 mark]

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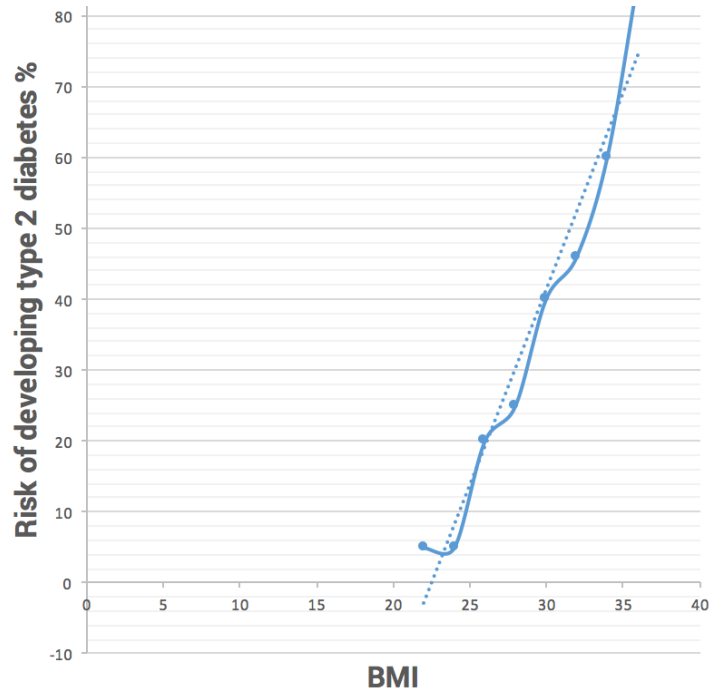
4

Explain the causal link between smoking during pregnancy and low birth weight

smoke contains carbon monoxide [1] which sticks to haemoglobin/red cells better than/with a higher affinity than oxygen [1] so less oxygen reaches the foetus [1] through the placenta [1] so less aerobic respiration can occur in foetal cells/less energy is released for cell division [1] leading to low birth weight or other birth defects [1] [6 marks]

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Type 2 diabetes is the inability to fully control your blood sugar levels due to the body's inability to respond to the hormone insulin. Obesity occurs when a person is excessively overweight and is characterised by having a BMI (Body Mass Index) of 30 or over. A BMI between 25-29 is considered to be overweight. To what extent does the data in **Figure 1** below support the hypothesis that obesity causes type 2 diabetes?



as BMI increases above 25 the risk of developing type 2 diabetes increases rapidly [1] showing a correlation [1] but this occurs with just being overweight (BMI 25-29) and does not need to be obese to see this correlation [1]. Type 2 diabetes is influenced by a range of other risk factors such as lack of exercise/heart issues/age etc [1] lacking these other facts we cannot claim it is a causation [1]

[4 marks]