

AQA

A Level

A Level Biology

HIV Answers

Name:

M M E

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Total Marks: /21

HIV

Answer	Marks
<p>1.</p> <p>a)</p> <p>i) Decreases the level T Helper Cells/CD4+</p> <p>ii) HIV is the virus, AIDS is the condition that develops as a result of the Virus.</p> <p>iii) the immune system is so weak that it cannot fight off other infections e.g. pneumonia which can be fatal</p> <p>b)</p> <p>i) – Once inside body cells, reverse transcriptase is used to make a complementary strand of DNA from the RNA template</p> <ul style="list-style-type: none"> - Host DNA polymerase used to make complimentary double strand. - double-stranded DNA is then inserted into the human DNA - The DNA remains latent in white blood cells -DNA codes for viral proteins that make new Viruses. -These eventually burst out of the cell -invade and destroy other white blood cells <p>ii) – period between initial invasion and replication of the virus</p> <ul style="list-style-type: none"> -when the virus is dormant 	<p>1 mark</p> <p>1 mark</p> <p>1 mark</p> <p>6 marks</p> <p>2 marks</p>

<p>iii) HIV virus replicates within CD4, white blood cells</p> <ul style="list-style-type: none">-HIV drugs cannot destroy the virus when it is inside body cells/ get to viral DNA in human genome-HIV virus changes rapidly, difficult to create a treatment that will work <p>c)</p> <p>i) antigen/antibody/foreign protein</p> <p>ii) – Patient sample taken</p> <ul style="list-style-type: none">- placed inside the wells of the microtiter plate-A sample containing the antibody is added-enzyme-linked to antibody.- Antibody complimentary to HIV antigen and binds to it if present.-colourless substrate for the enzyme is then added-a colour would develop to indicate the presence of HIV antigen.	<p>3 marks</p> <p>1 mark</p> <p>6 marks</p>
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