

Question Number	Answer	Mark
1(a)(i)	Any characteristic symptom of TB e.g. tubercles, bloody sputum, (general)body tissue wastage ;	(1)

Question Number	Answer	Mark
1(a)(ii)	D ;	(1)

Question Number	Answer	Mark
1(a)(iii)	<ol style="list-style-type: none"> 1. idea of {bacterium / eq} recognised as {non-self / eq} ; 2. reference to labelling of bacteria by B {lymphocytes / cells} ; 3. phagocytosis / phagocytic / phagocyte ; 4. descriptive detail of phagocytosis (involving {bacterium / eq}) ; 5. reference to formation of vacuole ; 	max (3)

Question Number	Answer	Mark
1(a)(iv)	<ol style="list-style-type: none"> 1. {kills / eq} {bacteria / eq} in {stomach / mouth / saliva / gastric juice} ; 2. (by) {(hydrochloric) acid / lysozyme} ; 	(2)

Question Number	Answer	Mark
*1(b)QW	<p>(QWC - Spelling of technical terms must be correct and the answer must be organised in a logical sequence)</p> <p>Supporting the hypothesis:</p> <ol style="list-style-type: none"> 1. both HIV and TB infection rates rise and then fall / eq ; 2. both HIV infection and TB infection increase {from 1990 to 2000 / for the first 10 years} / eq ; <p>Not supporting the hypothesis:</p> <ol style="list-style-type: none"> 3. TB infection falls from 2000 onwards but HIV continues to rise (until 2004) / eq ; 4. different {parameters / measures / variables / eq} for the two infections / eq ; <p>General points:</p> <ol style="list-style-type: none"> 5. idea of {more {data / information / eq} is needed / other factors (may be) involved} ; 6. reference to need for statistical {analysis / test} ; 7. such as correlation {data / test / named example} ; 8. there is no data that {links HIV infection with TB infection / shows that people with HIV also have TB / shows causal relationship / eq} ; 	<p style="text-align: right;">max (4)</p>

Question Number	Answer	Mark
2(a)	<ol style="list-style-type: none"> 1. RNA in HIV and DNA in {bacterium / eq} ; 2. comparative description of nucleic acid e.g. circular in bacterium and linear in HIV / eq ; 3. plasmids in {bacterium / eq} and no plasmids in HIV ; 	maximum (2)

Question Number	Answer	Mark
2(b)	<ol style="list-style-type: none"> 1. {keratin / protein} in skin {surface / epidermis} ; 2. idea of forms a {hard / impenetrable / physical / eq} barrier ; 	(2)

Question Number	Answer	Mark
2(c)(i)	<ol style="list-style-type: none"> 1. numbers decrease / eq ; 2. small decrease in {first week / between weeks {4 / 5} and 6} / eq ; 3. large decrease between weeks {1 / 2} to 3 / eq ; 4. credit use of manipulated figures ; 	maximum (2)

Question Number	Answer	Mark
2* (c)(ii) QWC	<p>(QWC - Spelling of technical terms (<i>shown in italics</i>) must be correct and the answer must be organised in a logical sequence)</p> <ol style="list-style-type: none"> 1. {<i>glycoprotein</i> / gp120} on virus / eq ; 2. binds with {receptors / CD4} / eq ; 3. on (surface) membrane of <i>lymphocytes</i> / eq ; 4. viral RNA enters the <i>lymphocyte</i> / eq ; 5. viral RNA used to produce viral DNA (in <i>lymphocyte</i>) / eq ; 6. by action of <i>reverse transcriptase</i> ; 7. ref to formation of new viruses ; 8. <i>lymphocyte</i> destroyed when new viruses {bud out of / leave} the cell / eq ; 9. T killer {cells / <i>lymphocytes</i>} destroy T helper {cells / <i>lymphocytes</i>} / eq ; 	maximum (5)

Question Number	Answer	Mark
2(c)(iii)	B {cells / lymphocytes} { not activated / not stimulated / are inhibited / eq} / fewer antibodies / T killer cells {increase / multiply / eq} ;	(1)