



HIV infection

	True	False
1 Human immunodeficiency virus (HIV)		
a) Replicates within the host's own cells	✓	
b) Attaches to the glycoprotein 120 protein on the surface of the host cell		✓
c) Converts viral DNA into RNA using reverse transcriptase		✓
d) Integrates its genetic information with host DNA by using an integrase enzyme	✓	
e) Uses a protease to mature new virions	✓	
2 Concerning HIV/AIDS facts and figures		
a) Some 33 million sub-Saharan Africans are believed to be infected		✓
b) It is thought that over a quarter of those infected in the UK are unaware of their status	✓	
c) HIV type-2 virus is more common than HIV type-1		✓
d) The first cases of AIDS were described in 1981	✓	
e) Those infected at the age of 20 years have an average life expectancy that is two-thirds that of the general population	✓	
3 HIV can be transmitted by:		
a) Oral sex	✓	
b) Breastfeeding	✓	
c) Receiving unscreened blood products	✓	
d) The use of contaminated needles	✓	
e) Exposure of intact skin to infected semen		✓
4 Concerning testing for HIV infection		
a) It is recommended that venous samples are screened to detect the presence of HIV antibodies and p24 antigen	✓	
b) All positive venous blood tests should be confirmed using a mouth swab test		✓
c) Opt-out testing in antenatal units and sexual health centres can help identify those who are infected but are not aware	✓	
d) All at-risk individuals, such as those with a needle-stick injury, should be tested	✓	
e) Point-of-care testing should only be offered in hospitals		✓
5 Regarding progression of HIV infection		
a) People are most infectious after seroconversion		✓
b) Most people have few, if any, symptoms in the initial stage of infection	✓	
c) AIDS is diagnosed when an individual's CD4 cell count falls below 200 cells/ μ l		✓
d) The virus rarely mutates		✓
e) Profuse night sweats can suggest that an infected patient's CD4 cell count has fallen	✓	

	True	False
6 Regarding combination antiretroviral therapy (CART)		
a) It consists of two or more antiretroviral medicines in combination		✓
b) Effective CART in treatment-naive patients should make the viral load undetectable within a fortnight		✓
c) Patient preference for individual medicines should be considered	✓	
d) Patients co-infected with HIV and hepatitis B requiring treatment should receive a regimen that contains medicines active against both viruses	✓	
e) Patients with CD4 cell count below 200 cells/ μ l should be treated	✓	
7 The following are non-nucleoside reverse transcriptase inhibitors		
a) Efavirenz	✓	
b) Emtricitabine		✓
c) Enfuvirtide		✓
d) Etravirine	✓	
e) Elvitegravir		✓
8 Protease inhibitors		
a) Can increase simvastatin levels	✓	
b) Include Atripla		✓
c) Block the protease known as glycoprotein 120		✓
d) Are usually "boosted" with a small dose of ritonavir	✓	
e) Have a lower barrier to resistance than non-nucleoside reverse transcriptase inhibitors		✓
9 About antiretroviral mechanisms of action		
a) Raltegravir binds to the protease enzyme blocking the formation of functional proteins		✓
b) Maraviroc binds to the chemokine receptor R5 preventing its use as a co-receptor for viral entry	✓	
c) Reverse transcriptase inhibitors target the integration step in viral replication		✓
d) Integrase inhibitors block the enzyme responsible for incorporating viral DNA into the host cell DNA	✓	
e) Fusion inhibition involves blockade of the viral surface protein gp41	✓	
10 Concerning CART toxicity and treatment failure		
a) Lipodystrophy is associated with initial treatment		✓
b) Virological failure is when the patient's immune system fails to respond to treatment		✓
c) Antiretroviral resistance can develop rapidly if drugs are missed, taken late or stopped suddenly	✓	
d) It is rare for patients on long-term CART to require treatment modification		✓
e) It is recommended that patients who experience virological failure for the first time should have a resistance test performed and their CART changed	✓	