

Coronavirus – answers

Education in Chemistry

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rsc.li/39Qtnxi

1)

- Hydrogen bonding
- London forces / temporary dipole-induced dipole
- Permanent dipole-dipole forces
- Ionic interactions

2) Amino acids with non-polar side groups such as alanine will lead to the formation of London forces.

3) The higher the reproduction number, the faster and bigger the spread of the disease, as each case will cause more new cases.

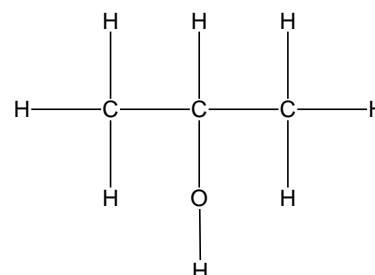
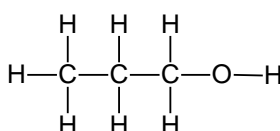
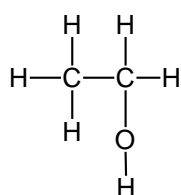
4) Sodium hydroxide

5)

- The long alkyl chain is non-polar (sometimes called hydrophobic).
- The carboxylate ion is polar (sometimes called hydrophilic).

6) The long non-polar hydrocarbon chain is hydrophobic and forms attractions to the grease. The soap molecules surround a droplet of grease with the hydrophobic ends pointing towards the grease and the hydrophilic ends towards the water. The droplet is then washed away. Something similar happens with a virus, but it is likely the soap molecules also disrupt the outer membrane of the virus.

7)



8) The alcohol will not remove the dirt and will only kill the exposed virus on the surface of the dirt. The virus could still be present inside the dirt.