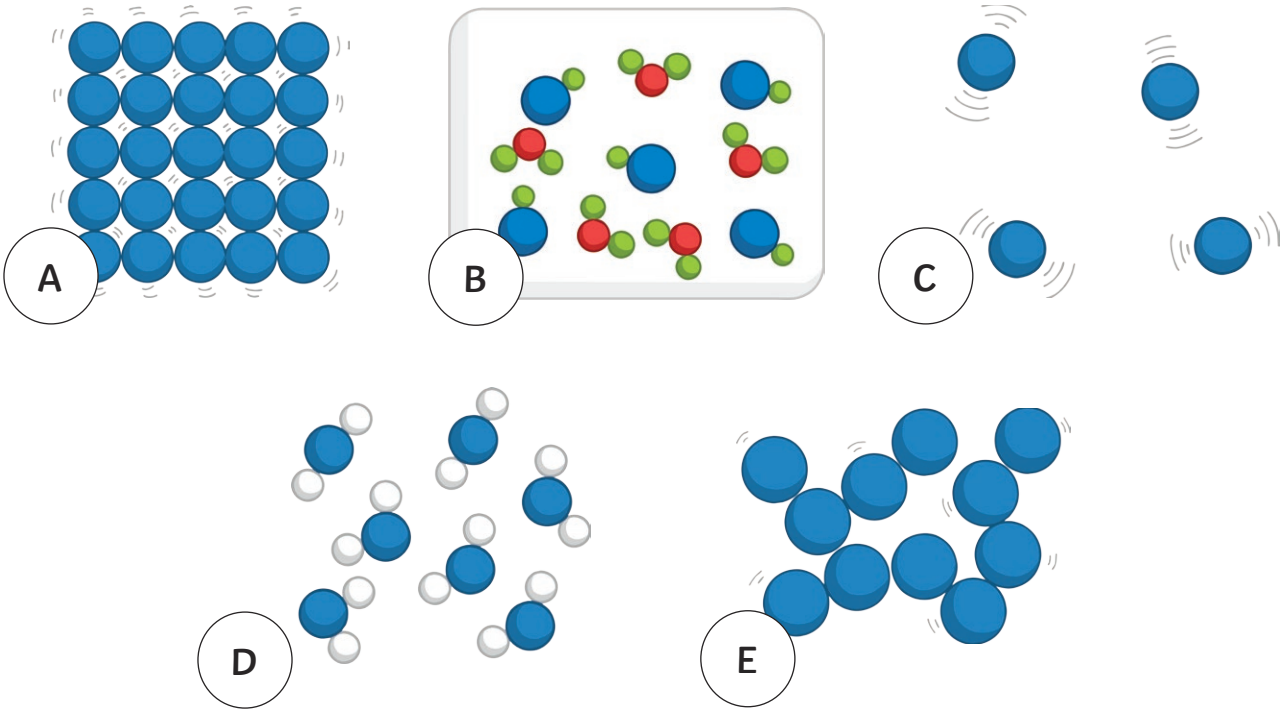
States of Matter **Exam Style Questions 2**

1. The diagrams below show atoms and molecules.



Give the letter of the diagram that represents

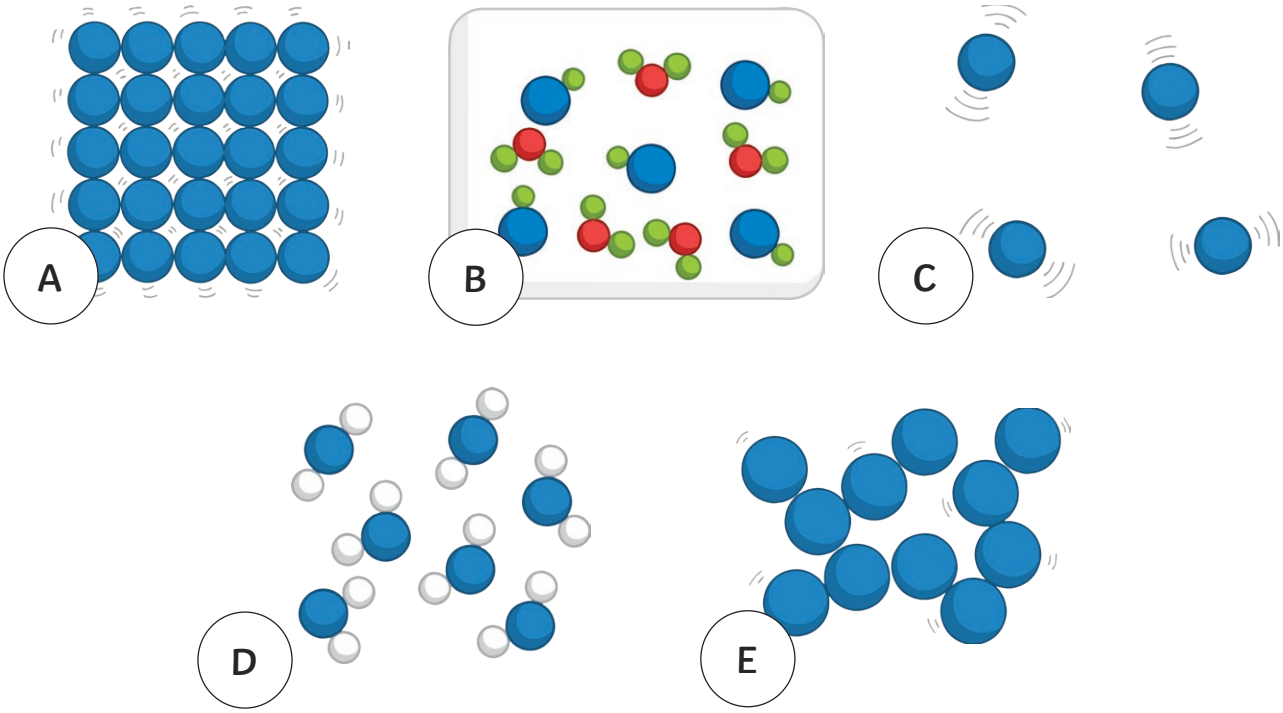
- A mixture:
- A compound:
- A liquid:

2. A group of pupils take three identical syringes, similar to the one shown below, and seal the end so nothing can come out. One syringe was filled with water, another with sugar, and the final left empty besides the air already in it.

They ask another pupil to push down the plungers on each syringe. Explain why the pupil could not push down the plungers for sugar and water, but they could push down the plunger for the air.

States of Matter **Answers**

1. The diagrams below show atoms and molecules.



Give the letter of the diagram that represents

- A mixture: **B**
- A compound: **D**
- A liquid: **E**

2. A group of pupils take three identical syringes, similar to the one shown below, and seal the end so nothing can come out. One syringe was filled with water, another with sugar, and the final left empty besides the air already in it.

They ask another pupil to push down the plungers on each syringe. Explain why the pupil could not push down the plungers for sugar and water, but they could push down the plunger for the air.
The sugar and water plungers do not move because the particles are very close together and cannot be compressed further, whereas the particles in air are far apart and can be compressed further.