

## Sound – 2022 June O Level 5054

1. *June/2022/Paper\_11/No.20*

A sound wave refracts as it passes from air to water.

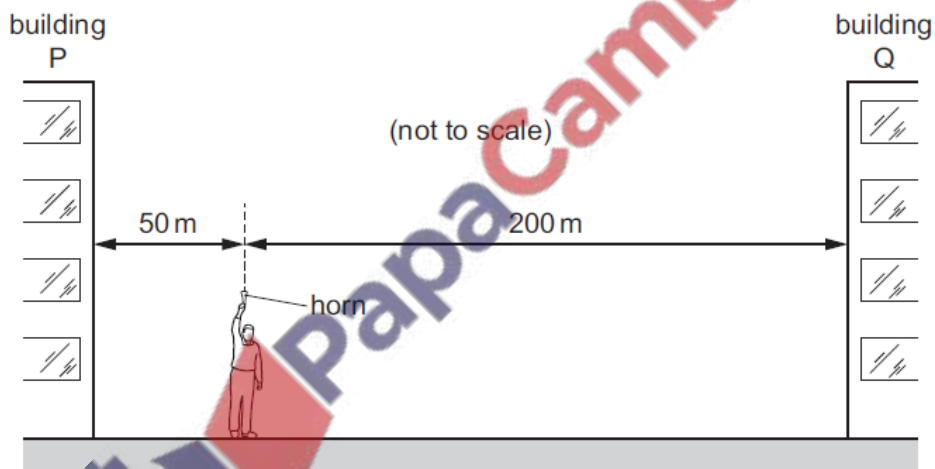
Which quantities change?

- A speed and frequency only
- B speed and wavelength only
- C wavelength and frequency only
- D speed, frequency and wavelength

2. *June/2022/Paper\_11/No.24*

A man stands between two tall buildings, P and Q.

He is 50 m from P and 200 m from Q.



He sounds a horn.

He hears the first echo from building P and 1.0 s later he hears the first echo from building Q.

What is the speed of sound calculated using this information?

- A 250 m/s
- B 300 m/s
- C 330 m/s
- D 500 m/s

3. June/2022/Paper\_11/No.25

Sound travels at different speeds in each of the three states of matter, solid, liquid and gas.

Which row shows where sound travels fastest and where sound travels slowest?

	state where sound travels fastest	state where sound travels slowest
<b>A</b>	gas	liquid
<b>B</b>	gas	solid
<b>C</b>	liquid	gas
<b>D</b>	solid	gas

4. June/2022/Paper\_11/No.26

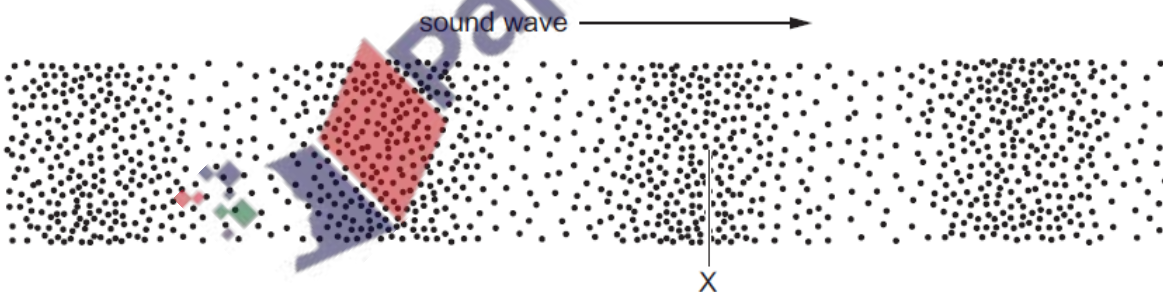
What is one of the uses of ultrasound?

- A cleaning jewellery
- B fluorescent tubes
- C optical fibres
- D sunbeds

5. June/2022/Paper\_12/No.27

A sound wave passes through a substance.

The diagram shows the position of molecules of the substance at one point in time.



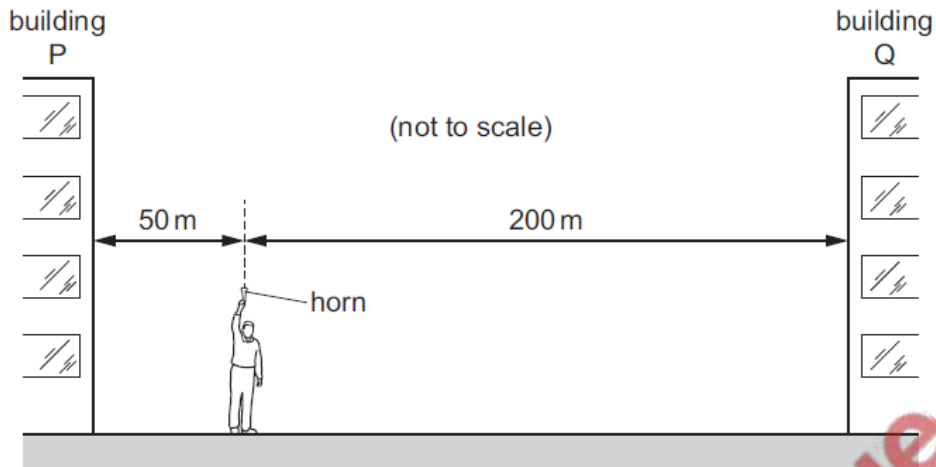
Which type of wave is a sound wave and what is at X?

	type of wave	at X
<b>A</b>	longitudinal	compression
<b>B</b>	longitudinal	rarefaction
<b>C</b>	transverse	compression
<b>D</b>	transverse	rarefaction

6. June/2022/Paper\_12/No.28

A man stands between two tall buildings, P and Q.

He is 50 m from P and 200 m from Q.



He sounds a horn.

He hears the first echo from building P and 1.0 s later he hears the first echo from building Q.

What is the speed of sound calculated using this information?

- A 250 m/s      B 300 m/s      C 330 m/s      D 500 m/s

7. June/2022/Paper\_12/No.29

What is one of the uses of ultrasound?

- A cleaning jewellery  
B fluorescent tubes  
C optical fibres  
D sunbeds