

NAME: .....

**SOUND**

1. D

2. D

3. D

4.

- |     |       |  |   |
|-----|-------|--|---|
| (a) | (i)   | greater/higher/more/larger/bigger;<br>[Reject longer]  | 1 |
|     | (ii)  | longitudinal;  | 1 |
| (b) | (i)   | vibration;   | 1 |
|     | (ii)  | 1.6;;<br>[Allow 1.3 / 3.2 / 16 for 1 mark]<br>[2.6 scores no mark]                                       | 2 |
|     | (iii) | 0.004;   | 1 |
| (c) | (i)   | reduced amplitude;<br>longer period shown;<br>(One cycle to be shown)                                    | 2 |
|     | (ii)  | quieter/softer/less loud/volume lower/harder to hear;<br>lower/deeper (sound)/pitch decreases/more bass; | 2 |

[10]

5.

(a) distance traveled per unit time or in one second / distance ÷ time  
or rate of change of distance

B1

(b)  $s = d/t$  in any algebraic or numerical form

any doubling of distance or final time

0.48 s (allow 0.24s 2/3 accept 0.5s)

C1

C1

A1

(c) 60/0.48 (5)

123.75 accept 120, 123, 124 (ecf (b))

C1

A1

Total [6]

6.

(a) reflection (of sound/ultrasound) B1

(b) waves of same period (by eye) B1

smaller amplitude (by eye) B1

(c) (i) 20-20 000 Hz B1

(ii) higher than (i) B1 [5]