

Name of the Student: \_\_\_\_\_

Max. Marks : 18 Marks

Time : 18 Minutes

Mark Schemes

**Q1.**

- (a) (i) *correct order essential*
- (A =) a microphone 1
- (B =) an oscilloscope  
*or cathode ray oscilloscope or CRO* 1
- (ii) the amplitude  
*accept any unambiguous indication* 1
- (iii) quieter / softer  
*do not accept less (which could refer to the amplitude, frequency or wavelength)* 1
- (b) sound cannot travel through a vacuum / (empty) space / free space  
*accept there is no medium for the sound to travel through* 1
- (because) there is / are nothing / no particles to vibrate  
*accept (because) there is / are nothing / no particles between them and the source (of the sound)* 1

[6]

**Q2.**

- (a) B 1
- (b) G 1
- (c) D 1
- (d) A 1

[4]

**Q3.**

- |     |       |  |   |
|-----|-------|--|---|
| (a) | (i)   | microwave  | 1 |
| (b) | (i)   | identical  | 1 |
|     | (ii)  | • increased risk of cancerous growth (between ear and brain)           | 1 |
|     |       | • complaints of headaches and tiredness                                | 1 |
|     | (iii) | any <b>two</b> from:   |   |
|     |       | • tests in a laboratory did not give effects of tiredness or headaches |   |
|     |       | • waves not strong enough to cause long term heat damage to cells      |   |
|     |       | • evidence to link mobile phones and ill health is not reliable        | 2 |

**[6]****Q4.**

- |      |   |   |
|------|---|---|
| (i)  | B | 1 |
| (ii) | A | 1 |

**[2]**