

## **M503 - Overnight Questions Day 1**

### **Question 1:**

What is the wavelength for sounds with the following frequencies?  
100 Hz, 500 Hz, 2,000Hz

### **Question 2:**

Why is the A weighting often used when measuring sound levels?

### **Question 3:**

How does the noise level vary with distance from a point source over a non reflecting surface?

### **Question 4:**

When is the sound power level of a source quoted in preference to the sound pressure level?

### **Question 5:**

Which descriptor is commonly used for assessment of occupational noise?  
Explain what each of the component symbols of this descriptor mean.

### **Question 6:**

The sound level of one machine is 90 dBA. A second, identical machine is added next to it. The resulting sound level when both machines are running is:

- 180 dBA
- 135 dBA
- 96 dBA
- 93 dBA
- 90 dBA

### **Question 7:**

What is the typical frequency range for human hearing?

**Question 8:**

The noise level in the machine area is 83 dBA. The noise level from a new machine at the operator location is quoted as 82 dBA. Will this installation require any changes in the work area?

**Question 9:**

The noise level at the worker location when a number of machines are operating has been measured as 91 dBA. The noise level from just one of these machines is known to be 89 dBA and management have suggested that this machine could be placed in a separate area and well away from the worker. If this is done what would be the noise level at the worker from the operation of the remaining machines?

**Question 10:**

Explain concisely how sound is transmitted through the components of the ear.