

Name of the Student: _____

Max. Marks : 15 Marks

Time : 15 Minutes

Mark Schemes

Q1.

- (a) (i) myopia or short sight **(1)**
 (ii) eyeball too long
 [or cornea too curved/powerful] **(1)**
 (allow C.E. if (i) is incorrect)

2

- (b) 1st diagram: rays focused on retina **(1)**
 2nd diagram: rays focussed before retina **(1)**
 3rd diagram: rays diverging from lens and appear to come from point 2.5m away **(1)**
 rays (after diverging) focused on retina

max 3

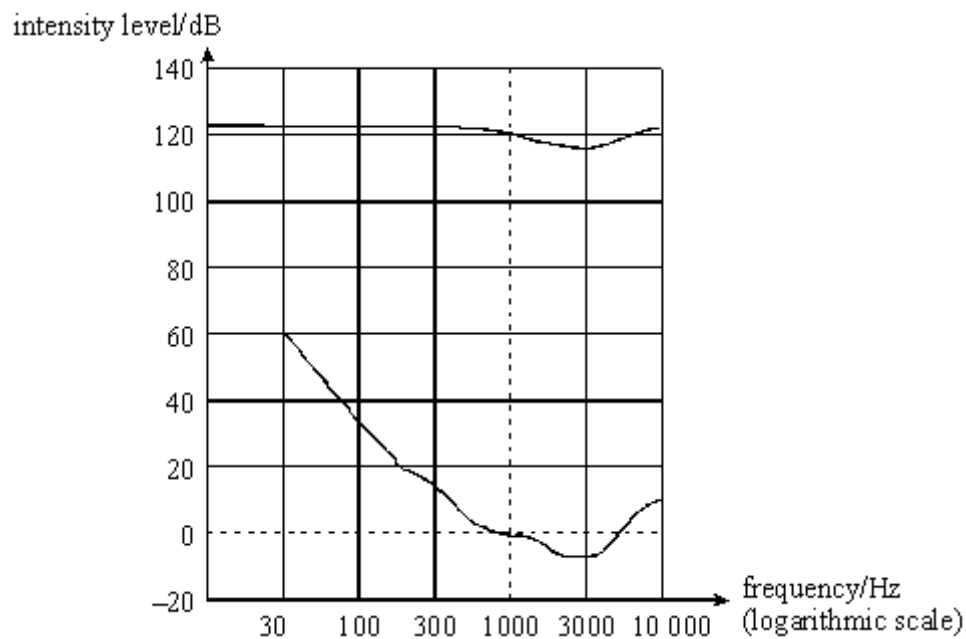
- (c) (i) (use of $P = \frac{1}{f}$ gives) $P = \frac{1}{(-)2.5}$ **(1)**
 $= -0.4 \text{ D}$ **(1)**

- (ii) (use of $\frac{1}{f} = \frac{1}{u} + \frac{1}{v}$ gives) $\frac{1}{-2.5} = \frac{1}{u} + \frac{1}{-0.2}$ **(1)**
 $\left(\frac{1}{u} = \frac{23}{5} \right)$ and $u = 0.22 \text{ m}$ **(1)**

4

[9]**Q2.**

- (a) (i)

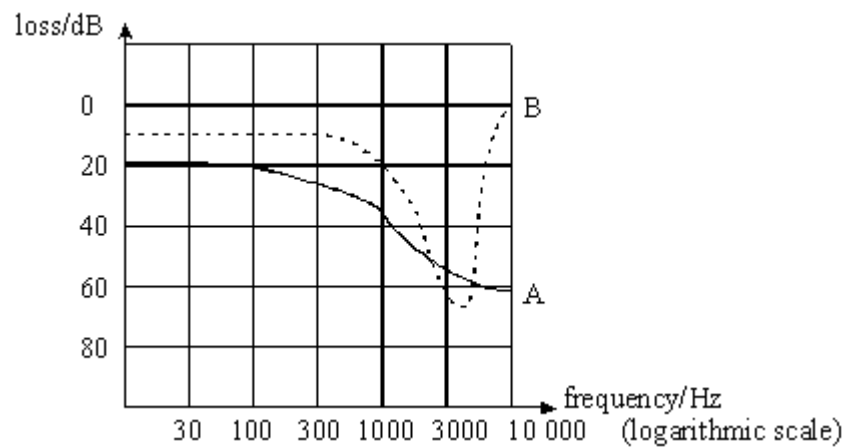


general shape flatter and passing through 120, 1000 **(1)**

- (ii) both most sensitive at ≈ 3000 Hz **(1)**

2

(b)



- (i) trace A (____), basic shape correct **(1)**
- (ii) trace B (-----), basic shape correct **(1)**
- (iii) loss due to age increases with frequency **(1)**
loss due to noise is maximum at 4000 Hz **(1)**

4

[6]