

UNIVERSITY COLLEGE LONDON

University of London

EXAMINATION FOR INTERNAL STUDENTS

For The Following Qualification:-

B.Sc.

BSc Audiology: Auditory Rehabilitation

COURSE CODE : AUDLS008

UNIT VALUE : 0.50

DATE : 22-MAY-06

TIME : 14.30

TIME ALLOWED : 2 Hours



**BSc Audiology
Year 2
AUDLS008**

Auditory Rehabilitation

**22ND MAY 2006
EXAMINATION**

TIME ALLOWED: 2 HOURS

Do **NOT** write your name on the answer sheet
only your assessment number

Answer **ALL** questions in Section A
Section A: 50 marks

Answer only **TWO** questions in Section B
Section B: 50 marks

TURN OVER

Section A: Answer ALL questions

- 1) Draw a block diagram of a hearing aid. Describe the functions of any 3 components.
- 2) What are AGC_o (Output Compression) and AGC_i (Input Compression) with regards to hearing aids? Discuss the differences between them, and outline their respective clinical applications.
- 3) Discuss the clinical uses of CROS and BICROS systems and illustrate the audiogram configurations for which they would be suitable. What are the potential benefits of each system?
- 4) Briefly describe Class A and Class B amplifiers in hearing aids. Discuss their respective advantages and disadvantages. Why is it possible to predict the battery life in a Class A amplifier?

Section B: Answer only TWO questions

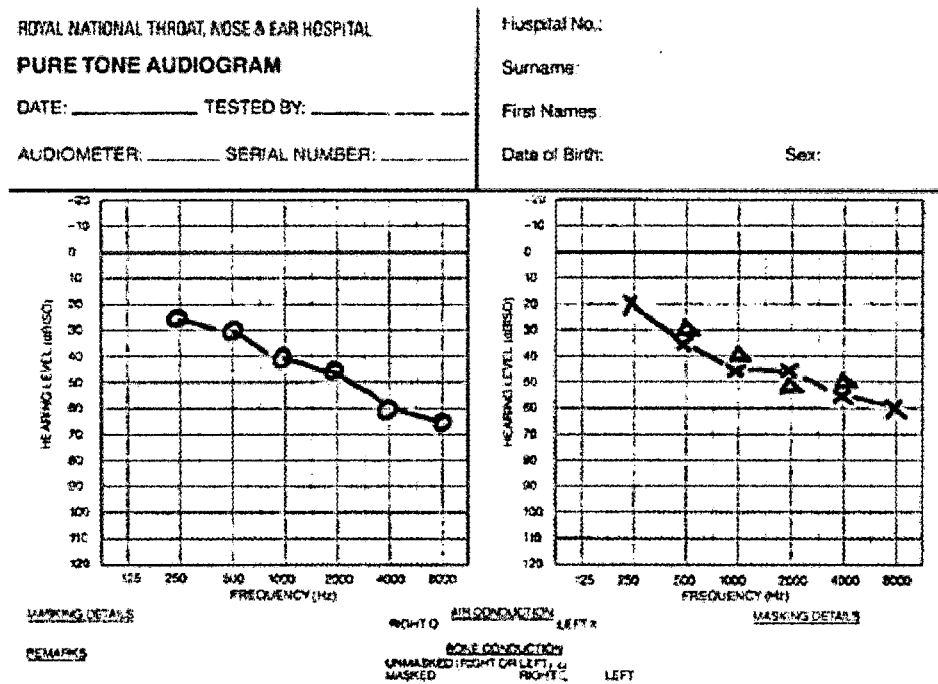
- 1) Discuss the range and diversity of methods used to assess and evaluate hearing aid performance, user benefit and patient satisfaction.
- 2)
 - a) Outline the fundamental differences between analogue and digital signal processing in relation to hearing aid technology.
 - b) With respect to digital signal processing discuss the following terms:
 - (i) Sampling rate
 - (ii) Quantization
 - c) What advantages does digital signal processing in hearing aids bring to the patient?

CONTINUED

- 3) A 65 year old lady has been referred to her local Hearing Aid Centre by her GP after noticing a gradual deterioration in hearing over the preceding two years. Her primary complaints include increased difficulties following conversation in group situations, and on the telephone. She also struggles to hear her two young grand children, which she finds particularly frustrating.

Discuss how this lady should be managed by her local ENT department and Hearing Aid Centre. As an audiologist working within this hospital outline how you would manage this patient in an attempt to eliminate or reduce her hearing disability and handicap.

Her hearing was assessed using pure tone audiometry and the results are shown on below:

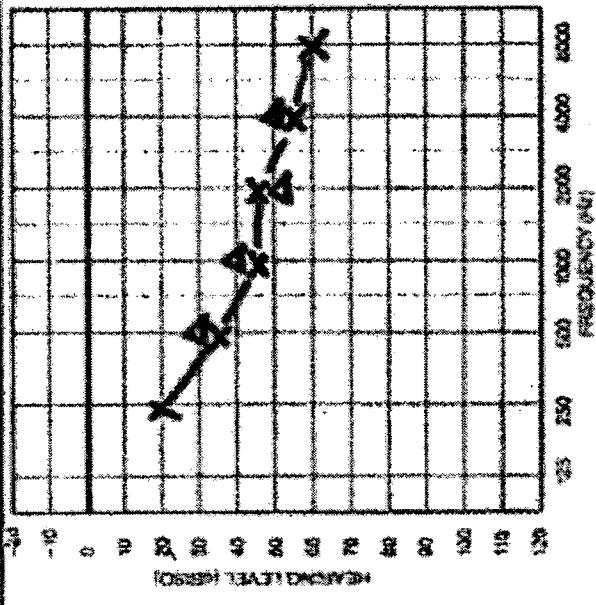
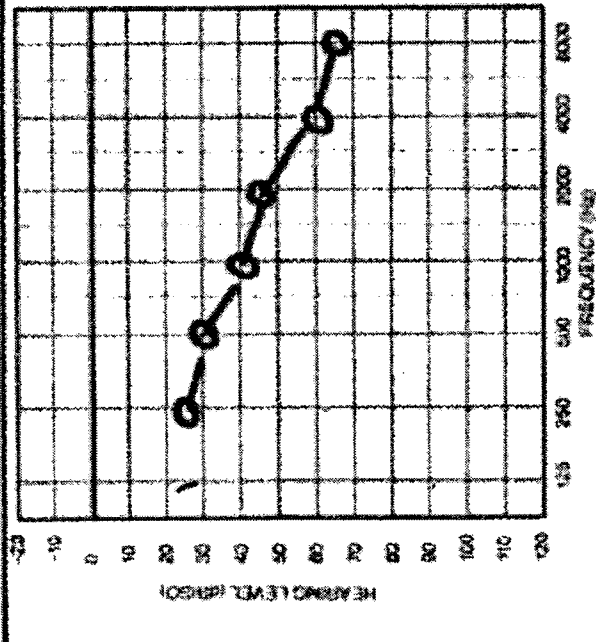


END OF PAPER

ROYAL NATIONAL THROAT, NOSE & EAR HOSPITAL
 PURE TONE AUDIOGRAM

DATE: _____ TESTED BY: _____
 AUDIOMETER: _____ SERIAL NUMBER: _____

Hospital No.: _____
 Surname: _____
 First Names: _____
 Date of Birth: _____ Sex: _____



WAXING DETAILS: _____
 REMARKS: _____
 AIR CONDUCTION: RIGHT O LEFT X
 BONE CONDUCTION: UNWAXED (RIGHT OR LEFT) O WAXED (RIGHT OR LEFT) X