

**THE HEARING AID COUNCIL  
REPORT ON THE THORY EXAMINATION 2006(2)**

**EXAMINATION PAPER 1  
SEPT 2006(2)**

**SECTION A**

- |            |   |           |
|------------|---|-----------|
| <b>1A1</b> | <b>(a) Draw a large labelled diagram of the middle ear.</b>     | <b>7</b>  |
|            | <b>(b) Explain the functions of the ossicles</b>                | <b>10</b> |
|            | <b>(c) Name 3 conditions in which the ossicles are involved</b> | <b>3</b>  |

**Number of Scripts =92      Marks Range 7-19      Average Mark=12.86**

The answers to this question were generally satisfactory. Candidates should, however, realise that marks are awarded only for answers which relate directly to the question posed.

a) The diagram of the middle ear posed few problems for the majority of candidates. Marks awarded reflect the amount of detail in the drawings and in the labelling.

b) Answers to this question could have been better focussed. Some candidates interpreted the question as one on the impedance matching system as a whole rather than focussing on the function of the ossicles.

c) This part presented no difficulties for the candidates.  
Val Newton

**1A2**

- |            |  |          |
|------------|--|----------|
| <b>(a)</b> | <b>Draw a detailed labelled diagram to show the structure of the Organ of Corti.</b>                           | <b>7</b> |
| <b>(b)</b> | <b>Explain the roles of the inner and outer hair cells.</b>  | <b>6</b> |
| <b>(c)</b> | <b>Explain how the inner ear separates the frequency components of a complex sound.</b>                        | <b>4</b> |
| <b>(d)</b> | <b>What are the auditory consequences of the loss of outer hair cells in a particular area of the cochlea?</b> | <b>3</b> |

**Number of Scripts =74****Marks Range 6-17****Average Mark=11.73**

This question was answered adequately. The main reason for loss of marks was inadequate detail in some areas.

- a) Most candidates were able to draw the Organ of Corti and label some of the structures. Inadequate labelling was the main reason for losing marks.
- b) Hair cell function was described adequately by most of those answering this question. The variation in marks reflected the amount of detail given.
- c) Few mentioned the Place theory as such but most could describe how the different frequency components of a complex sound were recognised.
- d) This section wasn't a problem for most candidates.
- Val Newton

**1A3**

- (a) Describe the appearance of the tympanic membrane in:-
- (i) acute otitis media 2
  - (ii) chronic suppurative otitis media 2
  - (iii) cholesteatoma 2
  - (iv) tympanosclerosis 2
  - (v) otosclerosis 2
  - (vi) haemotympanum 2
- (b) What steps can be taken to avoid the introduction of infection during otoscopy. 8

**Number of Scripts =31****Marks Range 6-15****Average Mark=10.45**

This question was generally well answered but there were one or two points of note.

There is still confusion between acute otitis media (AOM) and otitis media with effusion (OME). AOM is an acute infection with pain, temperature (not otoscopic features) and a red, bulging TM which may perforate with discharge. It is usually bacterial and responds to antibiotics. OME (or glue ear or secretory otitis media (SOM)) is the result of Eustachian tube dysfunction. The middle ear pressure reduces with retraction of the TM and secretion/effusion of fluid into the middle ear space to fill the vacuum. The TM may look almost normal. This is not an infection.

Chronic suppurative otitis media (CSOM) is a chronic infection in the middle ear. There is usually perforation with discharge. There may be retraction pockets.

Haemotympanum is blood in the middle ear space for whatever reason.

John Irwin

## 1A4

Write short notes on **four** of the following five subjects

- |     |                              |   |
|-----|------------------------------|---|
| (a) | Noise induced hearing loss   | 5 |
| (b) | Presbycusis                  | 5 |
| (c) | Obscure Auditory Dysfunction | 5 |
| (d) | Acoustic neuroma             | 5 |
| (e) | Meniere's disease            | 5 |

**Number of Scripts =85**

**Marks Range 5-19**

**Average Mark=14.21**

Despite having “four” underlined and in bold a few candidates answered all 5 parts of this question. In this case the examiners marked the first 4 sections only. There were no consistent errors or misunderstandings in the answers to this question.

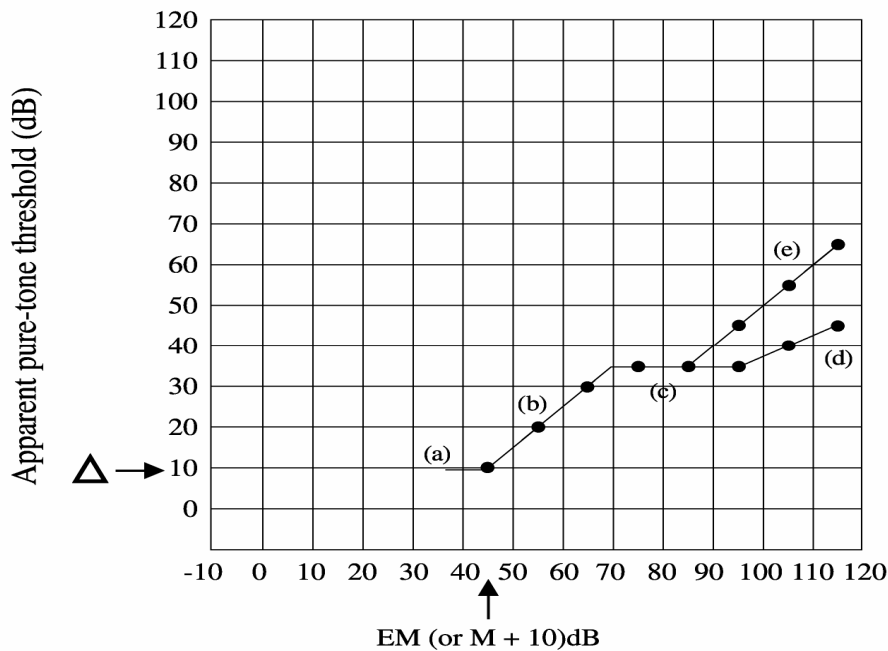
John Irwin

**EXAMINATION PAPER 1**  
**SEPT 2006(2)**

**SECTION B**

**1B1**

- (a) What instructions should be given to a client prior to performing masking? 2
- (b) Explain why masking may be difficult when there is a bilateral conductive hearing loss 2
- (c) When is it necessary to use the third rule of masking in pure tone audiometry? 4
- (d) Draw an audiogram showing hearing threshold levels where it would be necessary to use this rule. 2
- (e) Label and explain regions (a) to (e) of the following masking function. 5 x 2



**Number of Scripts =79**

**Marks Range =2-18**

**Average Mark=11.82**

In answering this question on masking, many candidates lost marks by omitting the instruction, 'no matter which ear you hear the tone in' and for the client to put a hand

up if there is confusion between the two sounds or either of the sounds become too loud.

The difficulty when masking bilateral conductive hearing loss is the noise in the non-test ear must be elevated by the amount corresponding to this loss before it begins to be effective in finding a plateau level. Most candidates mentioned this high level could cause a cross-masking effect, but few pointed out that, with a substantial conductive hearing loss, there may be no discerning plateau to find the true thresholds.

The need for Rule 3 masking was answered well, but a number of candidates were unable to plot this rule down on an audiogram, clearly demonstrating the rule was learnt by heart without the understanding of its practical application.

The labelled masking chart had its problems. Candidates did not provide a full answer for each section. Cross-masking and central masking readings were often reversed. Some candidates identified correctly but failed to give their descriptions - cross-masking is identified by the return of a 45 degrees angle, similar to the masking function before reaching a plateau, whilst central masking shows a more acute angle between 5 and 35 degrees.

Gillian Booth

**1B2**

- (a) Define the term *non-organic hearing loss* **2**
- (b) What are the indications during pure tone audiometry that the client may be exhibiting a non-organic hearing loss? **5**
- (c) Apart from repeating pure tone audiometry, **list** three audiometric tests for non-organic hearing loss **3**
- (d) Describe the procedure of **one** of the tests you listed in part (c) above **10**

**Number of Scripts =86****Marks Range 2-19****Average Mark=11.50**

Candidates did well in defining the two aspects of non-organic hearing loss (NOHL) as of psychogenic and malingering origin but many failed to mention the absence of any organic disorder.

The question clearly asked for indications of NOHL **during** pure tone audiometry (PTA) but a number of candidates wrongly listed speech audiometry as an indicator - a test outside the PTA procedure. An understanding of conversation voice which did not match with the average pure tone threshold was accepted. Other indicators were flat audiogram; inconsistent results; AC better than BC; always doubting tone presentation; exaggerating hearing problem; ignoring cross-hearing; and seeking visual clues.

There are many tests designed specifically for detecting NOHL and most candidates received full marks for listing three of these. For this reason tympanometry and stapedius reflex tests were not looked on favourably, although the stapedius reflex test is worth considering if the client presents a 'dead' ear. Candidates, that chose speech audiometry as a NOHL test, needed to include the measurement of the dB speech level at the half peak level (HPL) of the maximum score. The half peak level elevation should agree within 10dB of the average pure tone thresholds at 500 Hz, 1 kHz and 2 kHz. Anything less would indicate inaccurate pure tone thresholds.

Gillian Booth

### 1B3

Explain the following with respect to the acoustic benefits of binaural hearing

- |   |   |
|---|---|
| (a) sound localisation                            | 4 |
| (b) squelch effect                                | 4 |
| (c) the precedence effect                         | 4 |
| (d) binaural summation                            | 4 |
| (e) List any further benefits of binaural hearing | 4 |

**Number of Scripts =76**

**Marks Range 1-14**

**Average Mark=8.71**

Sound localisation was reasonably well answered by a majority of the candidates. Squelch effect was attempted by a number of people but most found it difficult to explain what is meant by the term. Precedence effect was very poorly answered by the very few who attempted it. Binaural summation was explained in terms of 3-6dB increase by most. Other benefits which were asked for were on many occasions a repeat of the effects indicated in the question.

Overall the question was poorly answered with a maximum mark of only 14 and most people achieving less than 10.

Deepak Prasher

## 1B4

- (a) **List** 4 acoustic and 4 non-acoustic requirements in a room to be used for sound field audiometry **8**
- (b) Explain why the sound level in the unobstructed field of a small, uniformly radiating source falls by 6dB for each doubling of the distance from the source **4**
- (c) Give two reasons why significant departures from this relationship might be found in practice when making measurements of the sound field of a loudspeaker in an audiometric room **2**
- (d) When would you use sound field audiometry as distinct from audiometry using earphones? **6**

**Number of Scripts =40**

**Marks Range 4-17**

**Average Mark=11.50**

(a) Most candidates have successfully identified Acoustic requirements, but there was confusion about non-acoustic – a large number continued to use acoustic examples under this heading and therefore have lost marks by this failure to distinguish correctly.

(b) Candidates usually identified inverse square law in their explanation, most marks lost were by the failure to explain by example or describe.

(c) Candidates generally identified sound reflection/Reverberation but failed to note the significant clue in Part (b) of this question.

(d) This question requires short identifiers and brief details for the use of sound field audiometry rather than long descriptions, some candidates clearly did not understand fully the reason for its use.

Tony Gunnell

**THE HEARING AID COUNCIL  
EXAMINATION PAPER 2  
SEPT 2006(2)**

**SECTION A**

**2A1**

- (a) Explain why you might initially recommend a unilateral hearing aid fitting even though the client has a symmetrical hearing loss. **6**
- (b) Suggest two factors you would take into account when deciding which ear to fit. **2**
- (c) What would be the consequences for a client of aiding only one ear? **12**

**Number of Scripts =87**

**Marks Range= 5-18**

**Average Mark=10.86**

As has been said so often in the past, many of the reasons why candidates do not make statements which are appropriate to the question are because the question has not been read sufficiently carefully. As a part of basic examination technique, this cannot be more strongly emphasised. The following comments will confirm this statement:-

**Part (a)**

This part of this question clearly states that you should explain why you would make a recommendation of a unilateral fitting even though there is a symmetrical hearing loss. Some candidates explained why they might recommend a CROS system which is so obviously inappropriate for the question.

A significant proportion of candidates included in their answer a variety of reasons why they would not eventually be providing a bilateral fitting based on the reasons why a client might decline to accept the wearing of two hearing aids such as cost or cosmetics. None of these affect an actual recommendation even if the outcome was eventually a bilateral fitting.

Previous unilateral hearing aid use is not a reason for not recommending a bilateral fitting.

There were many references to NHS fittings almost always being unilateral which is now no longer true and inappropriate for the question.

**Part (b)**

There were few statements to the effect that, if a bilateral hearing loss had to be aided unilaterally, the primary consideration would be selecting the ear which would provide the most, overall benefit.

Dexterity and audiometric considerations had far fewer inclusions than lifestyle considerations. The most frequently stated example of a lifestyle consideration was the occupation of taxi driver or driving instructor as if these were commonplace; not inappropriate but not exactly typical!

#### Part (c)

Generally, there was a very limited list of consequences of unilaterally aiding a bilateral hearing loss which is very disappointing considering the extent of the list and the great importance of this subject area. Most candidates concentrated too much on localisation which provided too narrow an answer. Localisation is, of course, very important but the reasons for its importance would have to be very fully explained to justify the proportion of the content of many answers. Usually, such answers were mostly devoted to the exact detail of how we localise at the expense of a wider range of consequences of unbalanced hearing.

Barry Downes

**2A2**

- (a) What is meant by *real ear measurement*? 2
- (b) What advantages does it have over other measures of hearing aid performance? 4
- (c) Describe each stage of the procedure for fitting a hearing aid using typical insertion gain equipment. 10
- (d) State TWO contra-indications for real ear measurements. 4

**Number of Scripts =45****Marks Range 6-18****Average Mark=12.09**

As can be seen from the spread of marks this question was generally well answered. There is little by way of any new general comments to be made other than the usual 'Answer the question'. Many candidates included copious notes on test boxes, 2cc couplers, K.E.M.A.R. etc, all good stuff but not needed in this question. There was some confusion between the terms R.E.A.R. and R.E.I.R.

The last part of the question had the most consistent errors. Here candidates were asked for two contra-indications to carrying out real ear measures. Far too many candidates discussed the various difficulties around actually performing REMS such as re-positioning of the probe microphone tube between tests, creating slit leaks that may cause feedback etc. These are valid challenges during the tests but NOT contra-indications to carrying them out.

As a last comment, it was pleasing to see such a good standard of answer form aptitude candidates, an obvious difference between those who have learnt the subject versus those whom have actually performed REMS!!

Rory Kewney

## 2A3

Explain why the following features of a DSP hearing aid system may be beneficial:-

- (a) Multiple programmable channels. 4
- (b) Experience or acclimatisation / adaptation levels. 4
- (c) Directional microphones. 4
- (d) A choice of listening programs (multi program/multi memory). 4
- (e) A volume control. 4

**Number of Scripts =86**

**Marks Range 5-15**

**Average Mark=10.60**

As a general statement on the answers to this question, two points need to be made. Firstly, many candidates were confused about the difference between “multiple programmable channels” and “multi program / multi memory” features. As a result their answers did not apply to the appropriate section of this question. Secondly, the merits of current directional microphone technology were generally very poorly stated which is particularly disappointing considering the importance of this aspect of DSP hearing aid technology.

**For part (i)**, when not confused with multi program hearing aids, this was generally well answered.

**For part (ii)**, the reasons for acclimatisation/experience/adaptation levels did not always clearly state the effect on the performance of a hearing aid system for new users compared to experienced hearing aid users.

**For part (iii)**, generally the weakest section for answers and too many statements stated incorrectly that directional microphones improve localisation ability. This is a subject which deserves a fuller understanding by candidates.

**For part (iv)**, same comment as for part (i).

**For part (v)**, generally not well answered with many candidates stating that a volume control was not a benefit as DSP hearing aids could operate automatically and did not normally require a manual volume control. This was not an answer to the question

Barry Downes

## 2A4

- (a) Describe the relative properties and merits of acrylic and silicon earmould materials. **4**
- (b) Explain the relative benefits of open, skeleton, shell and solid moulds? **8**
- (c) Explain how the acoustical properties are affected by venting, horning, tubing dimensions, and meatal depth on acoustical properties **8**

**Number of Scripts =64**

**Marks Range 5-15**

**Average Mark=10.19**

There was a worrying lack of knowledge and widespread confusion. Candidates tended to know the size of vent to be used with various hearing losses but little other detail. Many candidates did not know the effects of horning or of increasing or narrowing the tubing bore. Acoustical properties were asked for, therefore such properties as comfort did not gain marks. There was also some confusion over the difference between skeleton and open moulds.

Overall this question was not well done. The answers that achieved the best marks tended to be expanded lists of points.

Maryanne Maltby

**EXAMINATION PAPER 2**  
**SEPT 2006(2)**

**SECTION B**

**2B1** Describe the procedures carried out and information held for Clause 9 of the Code of Practice before a client is supplied with a new hearing aid. **10**

Describe the undertakings that shall be made at the time the hearing aid is supplied, to comply with Clause 19 of the Code of Practice **10**

**Number of Scripts =94**

**Marks Range 1-17**

**Average Mark=7.56**

The marks for this question were low. Many candidates were muddled between the contents of clauses 9, 10, 11 and 19. The meaning of clause 19 was frequently misunderstood and few candidates restricted themselves to a discussion of the undertakings that must be given, regarding guarantees, in order to comply with Clause 19  
Robert Rendell

**2B2**

- (a) Explain why a sudden onset severe hearing loss acquired in adult life often causes a marked handicap. **6**
- (b) Explain the consequences of having tinnitus. **8**
- (c) Explain the possible intervention strategies for relief from tinnitus. **6**

**Number of Scripts =86****Marks Range 6-18****Average Mark=11.93**

It was necessary for the candidates to read and answer the question as asked. Most people answered in terms of what they knew rather than adapting it to the question asked. Although the question asked about the consequences of tinnitus, some answers concerned themselves with all the other aspects of tinnitus rather than its consequences. However, overall there was a reasonable application of the candidates' knowledge and most people passed without difficulty.

Deepak Prasher

**2B3**

- (a) What is audiological rehabilitation? **8**
- (b) Outline how a Hearing therapist might assess the needs of a patient presenting with a hearing loss **6**
- (c) Explain how the information obtained in part (b) is used to contribute to the process of rehabilitation? **6**

**Number of Scripts =25****Marks Range 6-18****Average Mark=11.16**

There were some good answers to this question, but too many candidates restricted their discussions of rehabilitation to a single issue, such as auditory training, rather than describing a wider range of topics. Also many candidates misunderstood the differences between Hearing Therapists and RHADs and answered the question as if they undertook the same roles

Robert Rendell

**2B4.** How would you proceed when a client who is wearing a recently fitted, all-in-the-ear hearing aid system for the first time, complains about the following difficulties?

- (a) Their own voice sounds too loud, (5)
- (b) When using the telephone, the hearing aid feeds back (5)
- (c) Other peoples' voices are louder but not clear enough (5)
- (d) The aid is difficult to fit and the area around the helix is very sore (5)

**Number of Scripts =77**

**Marks Range 1-13**

**Average Mark=6.99**

The results were disappointing. Only 14 out of 84 candidates who attempted this question achieved 10 marks or more, the highest mark at 13.

This question was divided into 4 Sections, with 5 Marks allocated for each section. There were between five and eight 'solutions' for each 'difficulty' with one mark allocated for each solution, up to a maximum of 5 marks for each difficulty.

Unfortunately, many candidates suggested only one or two possible courses of action for each problem and as a consequence only achieved one or two marks for each section.

When answering parts a) and b), many candidates wrote descriptions and explanations, of occlusion and its effects, and the causes and acoustic features of feedback. Although accurate, the candidates were not awarded marks for this.

Candidates also failed to gain marks, when they gave vague answers on how to proceed to alleviate the hearing aid users difficulties.

e.g. *'change the response of the hearing aid',*  
*'reprogram the hearing aid',*  
*'change the compression settings'*

More than one candidate stated that the solution to the hearing aid wearers voice being too loud was to *'tell them to speak in a quieter voice', 'tell the client that this is something you will get used to '*,

Some suggestions to solve the problem of the telephone causing feedback, *'take the hearing aid out' or 'use the other ear'*

The standard of answers to this question, appear to indicate a poor understanding of rehabilitative needs, and duty of care for the hearing aid user.

Perhaps this needs more emphasis in the training courses and more effort from the candidates

Helen Belcher

**EXAMINATION PAPER 3**  
**SEPT 2006(2)**

**SECTION A**

**3A1**

- (a) Explain why you might initially recommend a unilateral hearing aid fitting even though the client has a symmetrical hearing loss. **6**
- (b) Suggest two factors you would take into account when deciding which ear to fit. **2**
- (c) What would be the consequences for a client of aiding only one ear? **12**

See comments for 2A1

**3A2**

- (a) What is meant by *real ear measurement*? **2**
- (b) What advantages does it have over other measures of hearing aid performance? **4**
- (c) Describe each stage of the procedure for fitting a hearing aid using a typical insertion gain equipment. **10**
- (d) State TWO contra-indications for real ear measurements. **4**

See comments for 2A2

**3A3**

Explain why the following features of a DSP hearing aid system may be beneficial:-

- (a) Multiple programmable channels. **4**
- (b) Experience or acclimatisation / adaptation levels. **4**
- (c) Directional microphones. **4**
- (d) A choice of listening programs (multi program/multi memory). **4**
- (e) A volume control. **4**

See comments for 2A3

**3A4**

- (a) Describe the relative properties and merits of acrylic and silicon earmould materials. **4**
- (b) Explain the relative benefits of open, skeleton, shell and solid moulds? **8**

(c) Explain how the acoustical properties are affected by venting, horning, tubing dimensions, and meatal depth on acoustical properties **8**

See comments for 2A4. This question was answered reasonably well except that several candidates did not answer the whole question.

Maryanne Maltby

**3A5** How would you proceed when a client who is wearing a recently fitted, all-in the-ear hearing aid system for the first time, complains about the following difficulties?

- (a) Their own voice sounds too loud **(5)**
- (b) When using the telephone, the hearing aid feeds back **(5)**
- (c) Other peoples' voices are louder but not clear enough **(5)**
- (d) The aid is difficult to fit and the area around the helix is very sore **(5)**

See comments for 2B4

**EXAMINATION PAPER 3**  
**SEPT 2006 (2)**

**SECTION B**

**3B1**

Describe the procedures carried out and information held for Clause 9 of the Code of Practice before a client is supplied with a new hearing aid. **10**

Describe the undertakings that shall be made at the time the hearing aid is supplied to comply with Clause 19 of the Code of Practice **10**

See comments for 2B1

**3B2** With reference to the Hearing Aid Council Code of Practice answer the following;

- (a) Clause 10 of the Code of Practice enables a dispenser to visit a client at his home but only if certain conditions are observed. What basic over-riding principles are imposed on a dispenser wishing to visit a client at home? **5**
- (b) What are the rules about making survey enquiries with a view to securing business? **5**
- (c) Specify the restrictions placed on a non-medically qualified person **5**
- (d) Before clients have been supplied with hearing aids, what statement does Clause 11 (1) require that dispensers provide in writing to clients which refers to Hearing Aid Council and its Code of Practice. **5**

This was a straightforward question which was answered well, showing a good level of knowledge of the CoP.

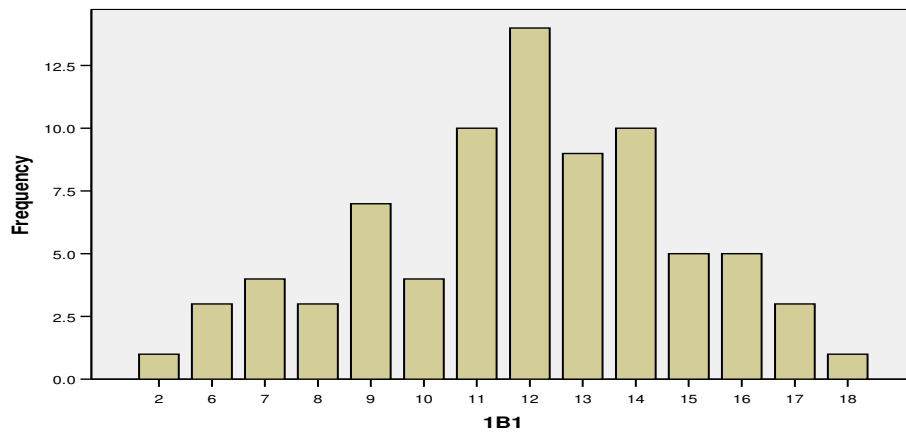
Maryanne Maltby

## Overview

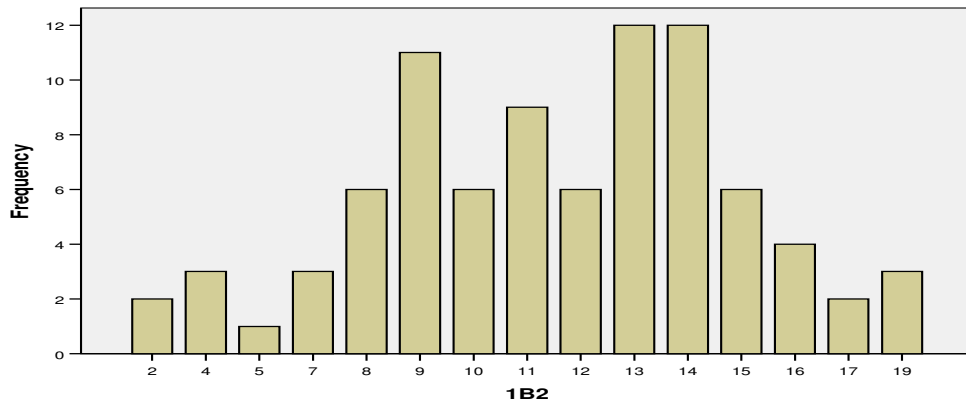
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1A1	92	7	19	12.86	2.443
1A2	74	6	17	11.73	2.446
1A3	31	6	15	10.45	2.447
1A4	85	5	19	14.21	3.008

	N	Minimum	Maximum	Mean	Std. Deviation
1B1	79	2	18	11.82	3.054
1B2	86	2	19	11.50	3.593
1B3	76	1	14	8.71	2.751
1B4	40	4	17	11.50	3.595
2A1	87	5	18	10.86	2.086
2A2	45	6	18	12.09	3.066
2A3	86	5	15	10.60	2.088
2A4	64	5	15	10.19	2.349
2B1	94	1	17	7.56	3.729
2B2	86	6	18	11.93	2.424
2B3	25	6	18	11.16	3.249
2B4	77	1	13	6.99	2.314

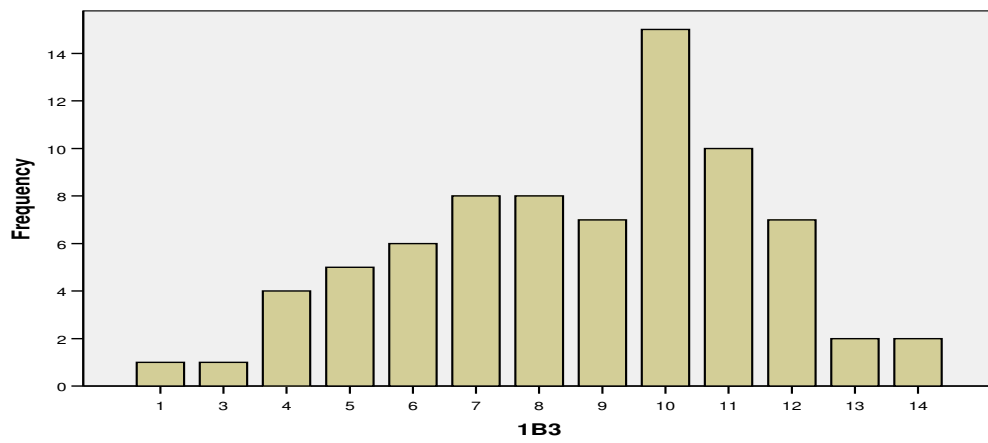
**1B1**



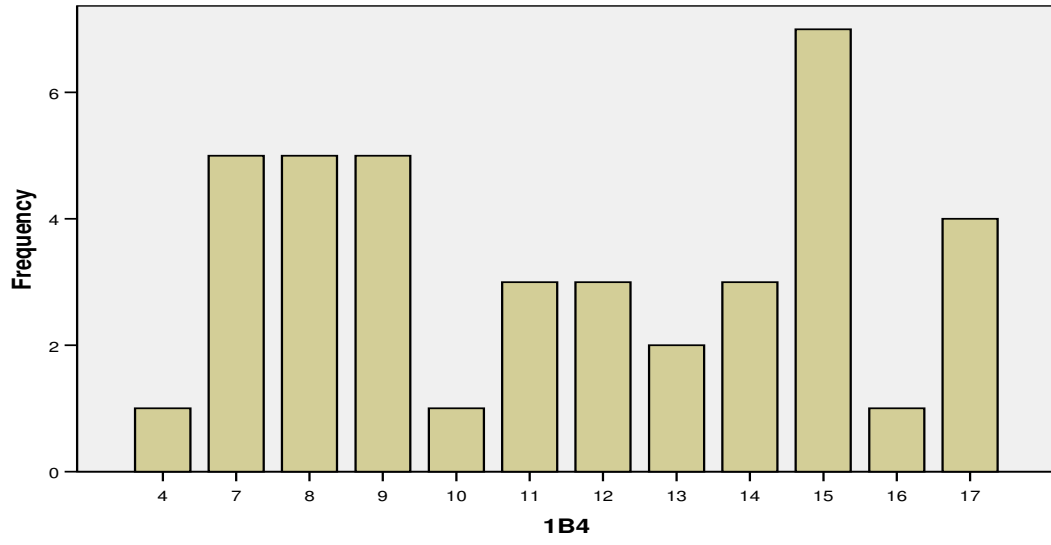
**1B2**



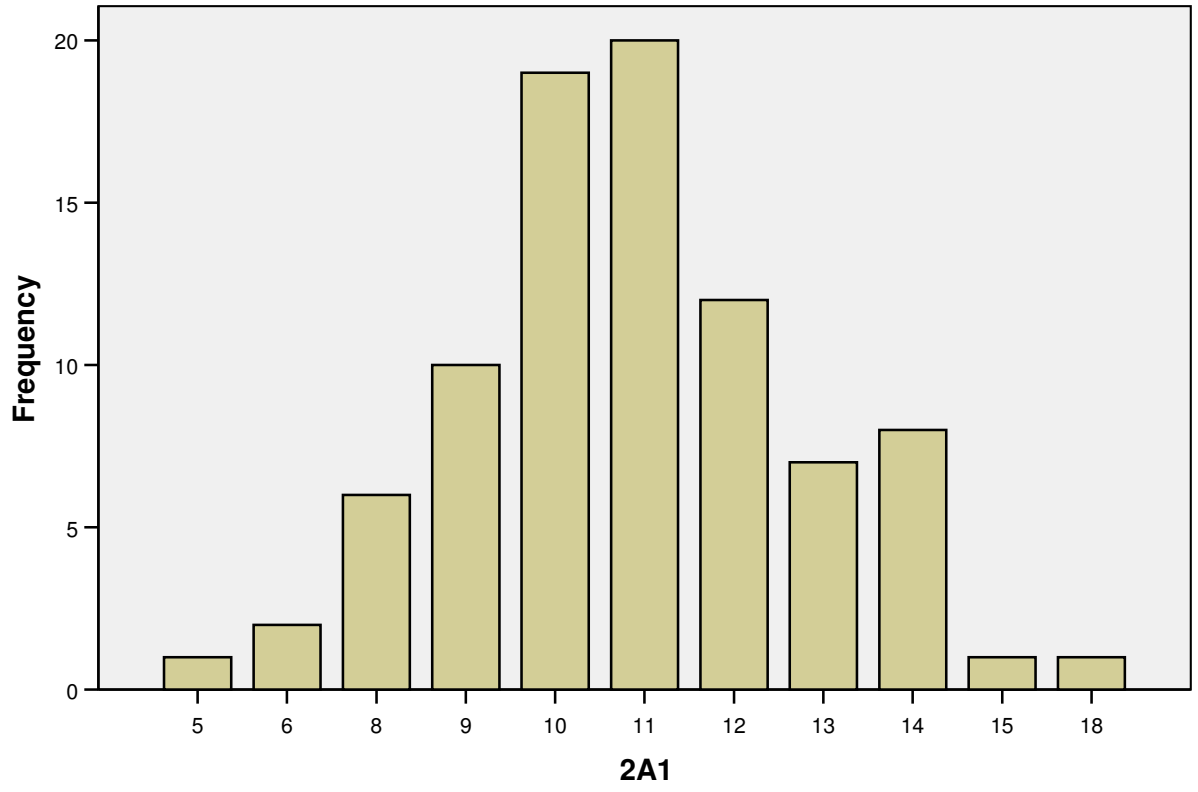
**1B3**



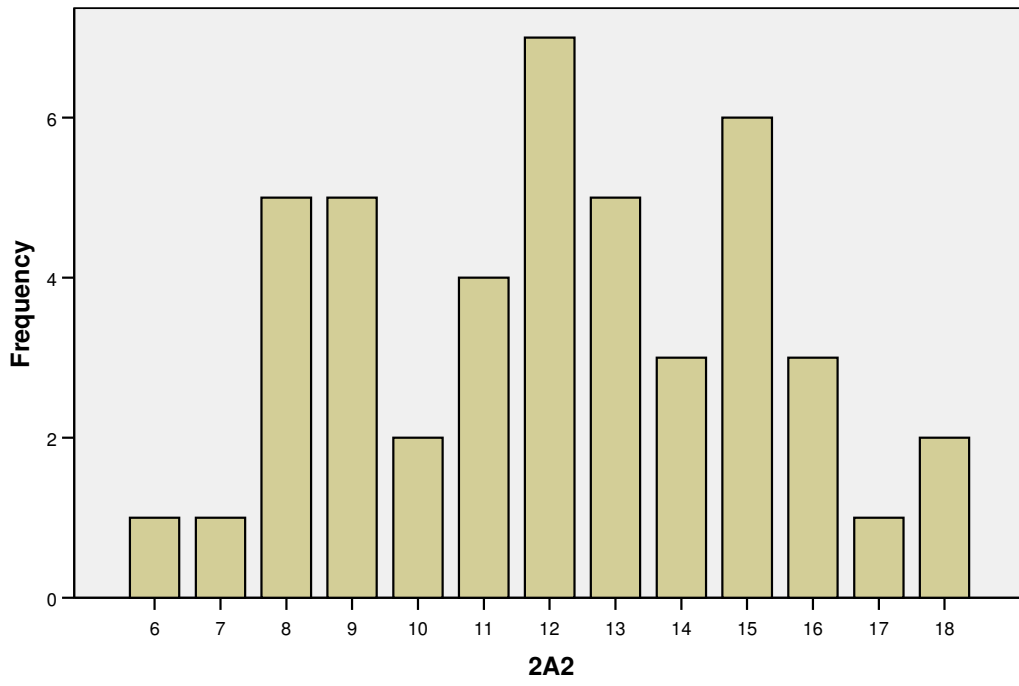
**1B4**



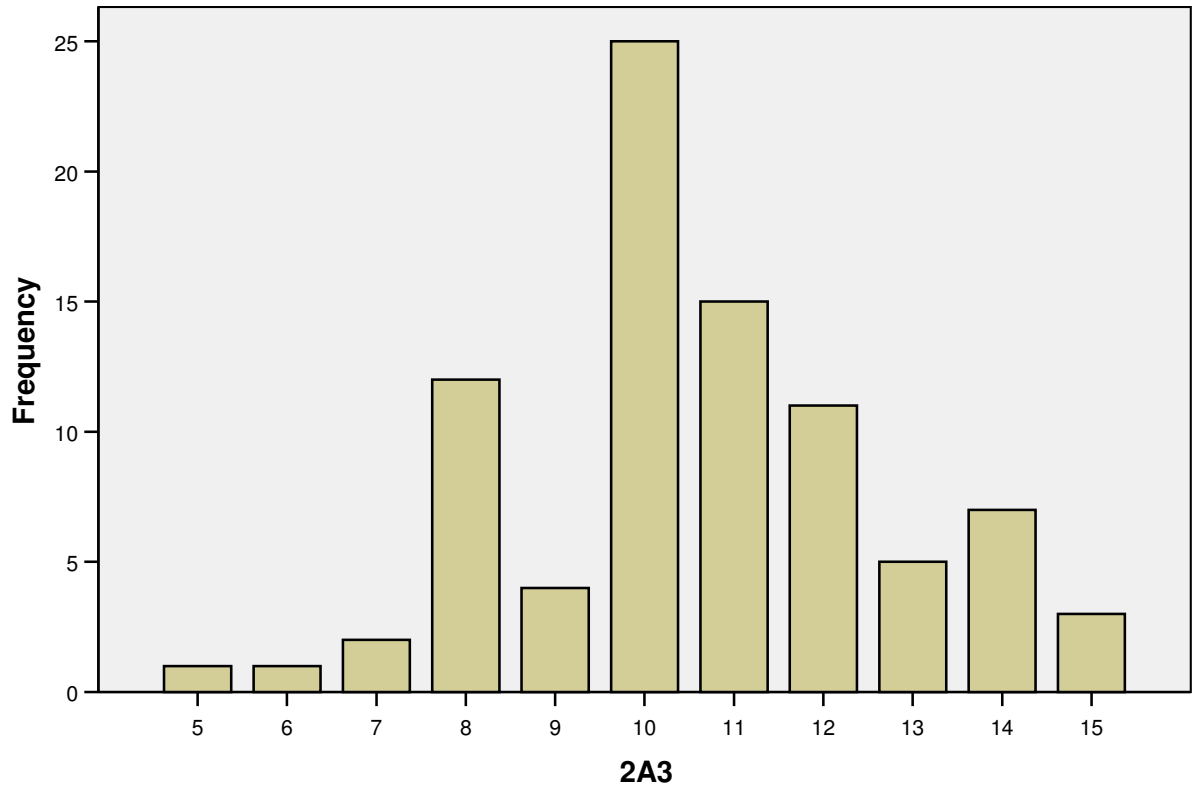
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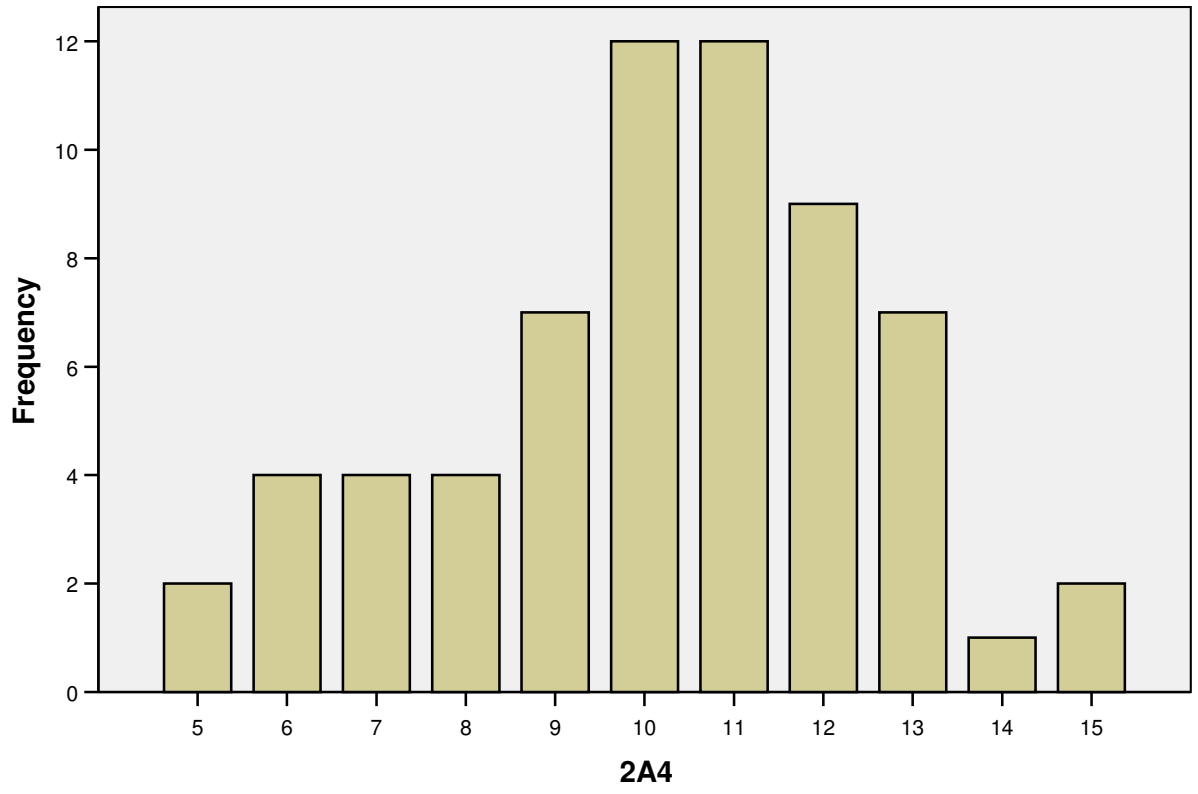
**2A2**



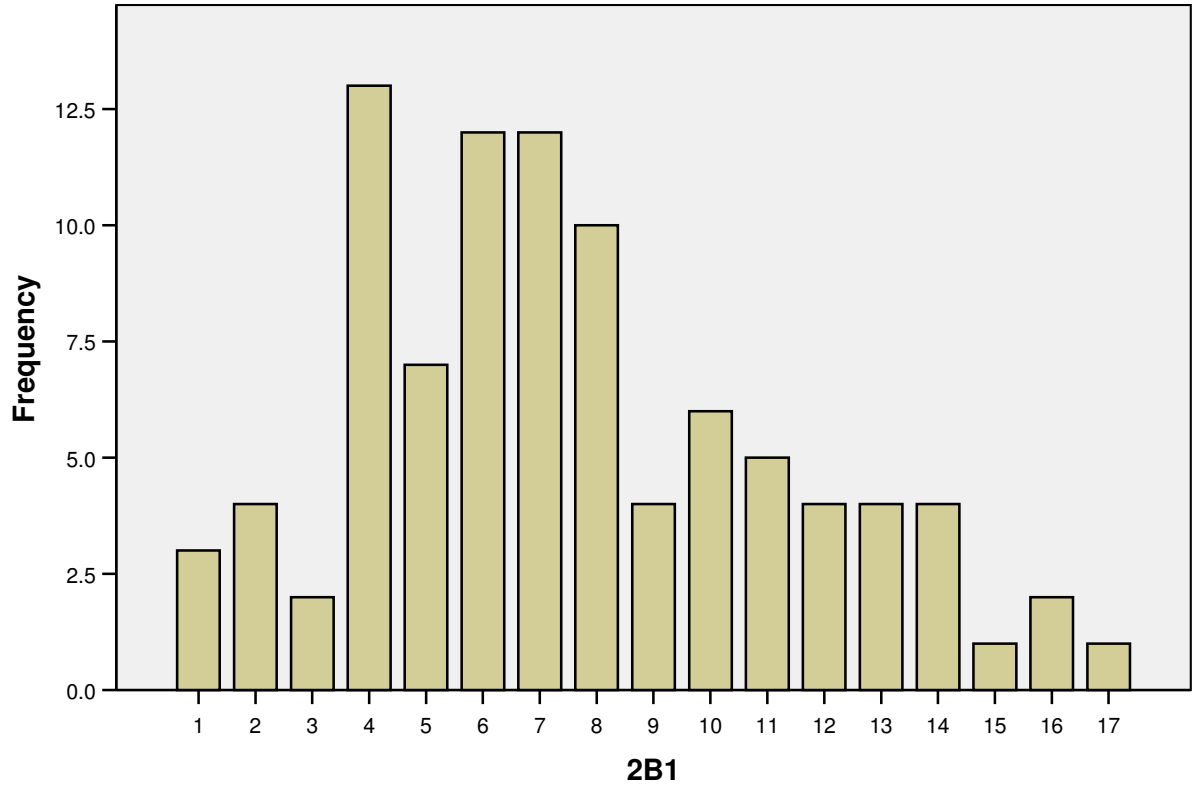
### 2A3



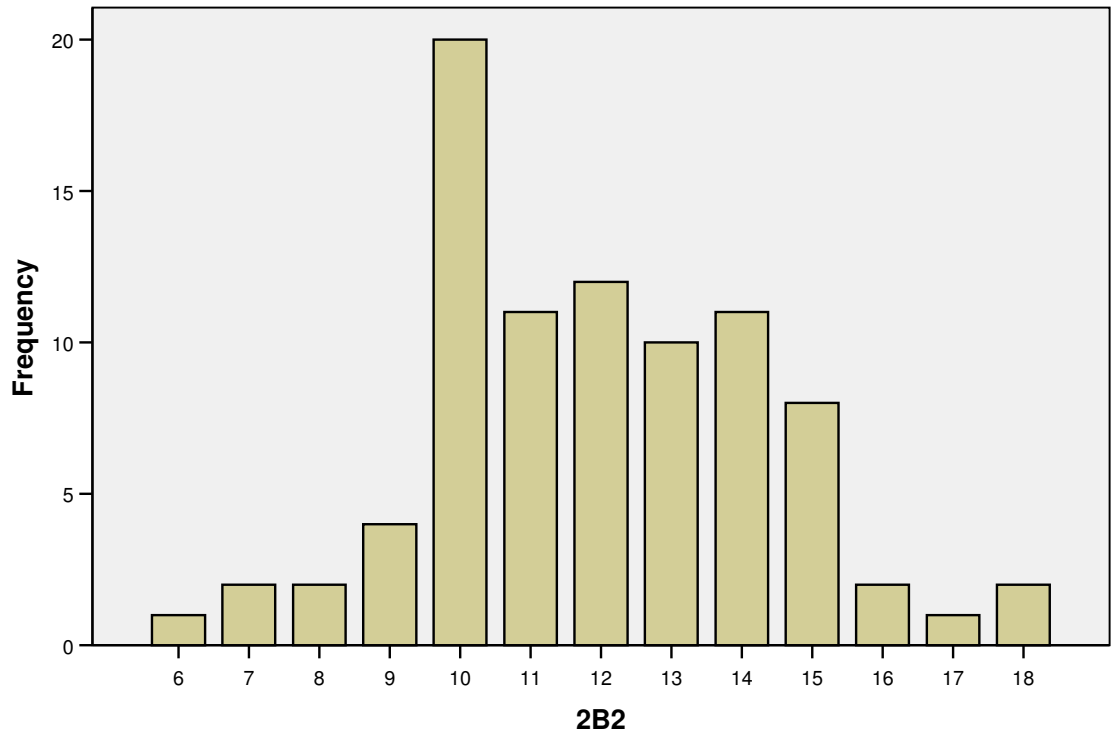
## 2A4



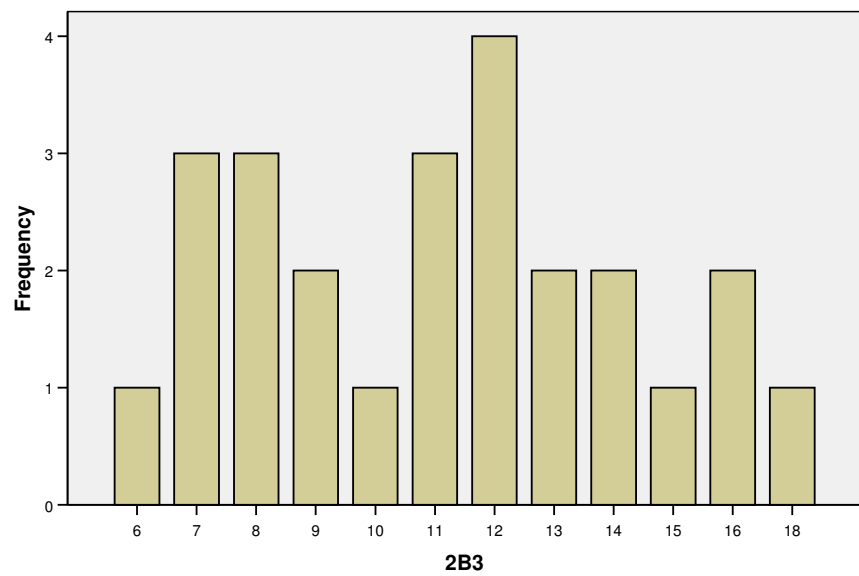
## 2B1



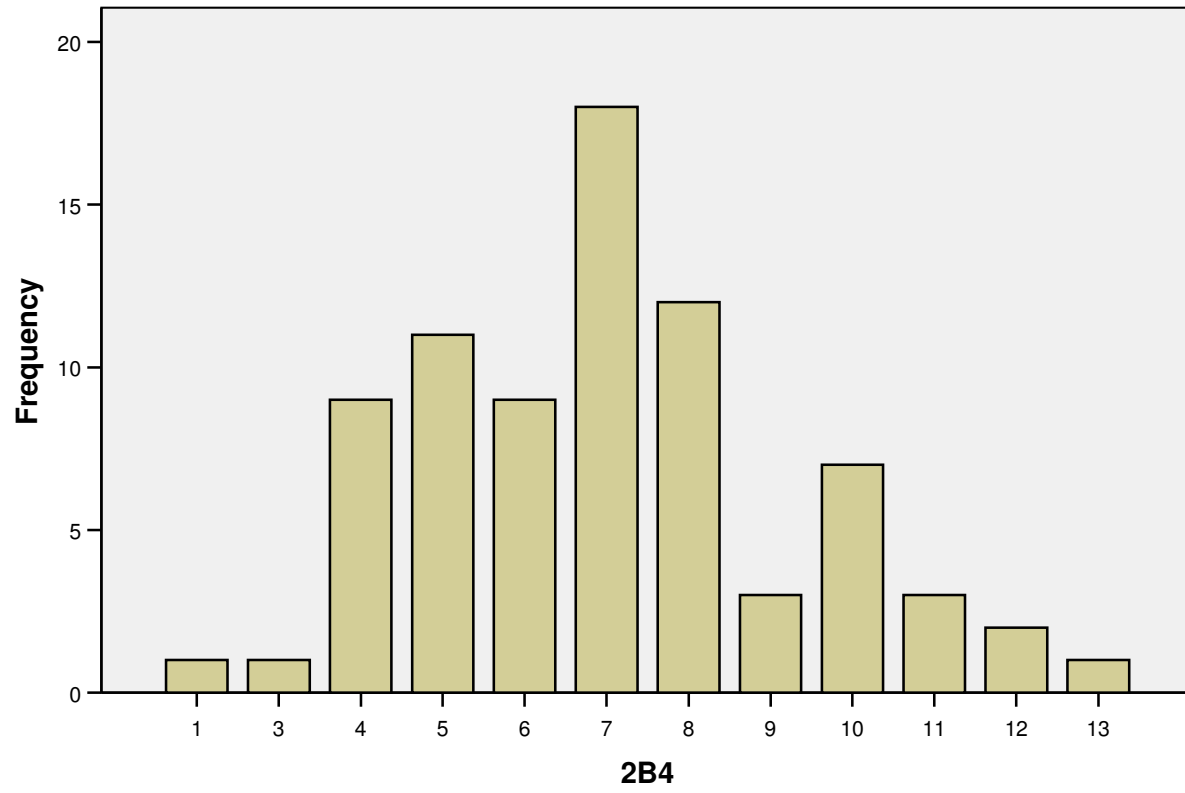
## 2B2



**2B3**



**2B4**



**Statistics**

		1B1	1B2	1B3	1B4	2A1	2A2	2A3	2A4	2B1	2B2	2B3	2B4
N	Valid	79	86	76	40	87	45	86	64	94	86	25	77
	Missing	23	16	26	62	15	57	16	38	8	16	77	25
Mean		11.82	11.50	8.71	11.50	10.86	12.09	10.60	10.19	7.56	11.93	11.16	6.99
Median		12.00	12.00	9.00	11.50	11.00	12.00	10.00	10.00	7.00	12.00	11.00	7.00
Range		16	17	13	13	13	12	10	10	16	12	12	12
Minimum		2	2	1	4	5	6	5	5	1	6	6	1
Maximum		18	19	14	17	18	18	15	15	17	18	18	13

## **OSPE REPORT 2006(2)**

### **Amendments to Marking Sheets for OSPEs 2006 (2) Examinations**

The following marks were agreed prior to OSPE examination commencement on Monday 20<sup>th</sup> November 2006

<b>OSPE Station Number</b>	<b>Pass Mark</b>	<b>Distinction Mark</b>	<b>Total Mark</b>
<b>1</b>	11	19	20
<b>2</b>	12	25	30
<b>3</b>	3	7	7
<b>5</b>	23	29	32
<b>6</b>	13	18	20
<b>7</b>	22	28	30
<b>9</b>	12	18	20
<b>10</b>	24	28	30
<b>11</b>	21	28	30
<b>12</b>	18	25	28
<b>13</b>	22	31	32
<b>14</b>	7	12	12

Old marking sheets have been used to save paper but the marks are according to schedule above with pass/fail and distinction categorisation based on the above Table NOT on the candidate marking sheets used.

Station 1: Critical error by the candidate in terms of referral is deemed failure

Station 2: Based on pass mark with objective marking including negative marks for incorrect answers and no marks for don't know.

Station 3: DVD error detection on aspects of audiometry were assessed for correspondence between different DVDs and found that DVD 1 was easier than DVD 2,3 and 5 thus a correction factor (-2) was applied to marks for DVD 1 to bring them in line with the other DVDs. Furthermore the marking was based on targeted errors being detected rather than the total number being identified overall. Total number of target errors on

each DVD was 7. Pass mark was set at 3 correctly identified from the 7. Thus some candidate marking sheets may have several marks. The final mark is in the bottom right hand corner of the sheet.

Station 5 and 6: Pass mark given on marking sheet for station 5 is as indicated but station 6 has an older pass mark.

Station 7: Critical errors (unsafe practice or unfit for purpose) can mean failure on this station

Station 9: Critical errors (unsafe practice or unfit for purpose) can mean failure on this station

Station 10 and 11: Critical errors (unsafe practice) can mean failure on this station. Old marking sheets indicate different pass mark to that indicated in the Table above.

Station 12: An Independent panel of examiners assessed the errors on the impressions and agreed a marking schedule as some inconsistencies were noted partway through the examination. Subsequently all papers were remarked using the agreed marking scheme. Thus some candidate marking sheets may have several marks. Only the consensus marking scheme mark has been taken for each candidate.

Station 13: No changes were necessary for this station.

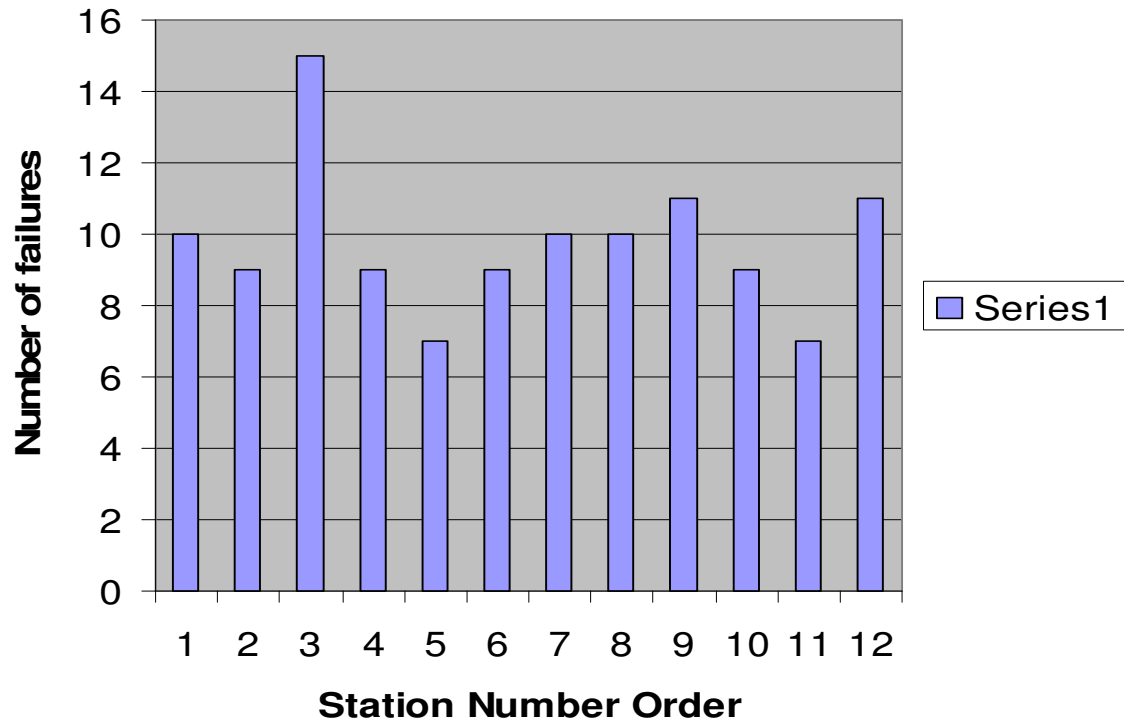
Station 14: A number of different DVDs were used with marking showing no differences between them.

Overall marking of OSPE stations: Total pass/fail analysis revealed that a number of candidates had failed only 1 station. These candidates' marking sheets were reassessed for any discrepancies in the addition of marks on each sheet or any other errors in transcription to spreadsheet. This analysis revealed no changes were necessary to the marks and the original marks stand.

The results of the OSPE examinations were examined for the order effects in terms of the stations to determine whether greater failures occurred in stations after the first 9 stations but as the graph below shows no order effects were observed.

Each individual station had a pass rate of between 85-98% and most candidates passed at least 9 stations on first attempt.

**Failure by station order**



## **STATION 1**

**All candidates passed this Station.**

**Many candidates have learned from their previous experience but some continued to work to a pre-determined plan rather than adapt to the examination situation. Questions were still asked first about symptoms other than the one indicated as being the reason for the “client” seeking a consultation. More detailed questioning would have helped some candidates gain more marks. For example, marks were lost by some candidates who, having determined that a symptom eg tinnitus was present, were content and failed to ask if it was in one or both ears.**

## **STATION 2**

**All candidates passed this Station.**

**There were no errors made consistently by candidates. Candidates seemed to be familiar with negative marking.**

## **STATION 3**

**PRIMARY EXAMINATION SESSION (NOV 2006)**

**N = 105 95 candidates passed. Pass rate = 90%**

**83 candidates achieved a pass. A further 12 candidates achieved distinctions.**

**10 candidates failed.**

**This station has been reworked to provide existing film material in a revised format of 7 short video clips instead of ten. Instructions have been simplified and the list of possible errors on the answer grid has been reduce from over 20 choices to 10 choices. There are 3 clips on air conduction testing, 2 clips on bone conduction testing and 2 clips on masking techniques.**

## **OSPE RESITS (JAN 2007)**

**A total of 16 candidates re-sat this station. All candidates passed with 2 candidates achieving distinctions. Pass rate for resits = 100%**

### **General comments.**

**This would seem to be a more appropriate format for this station. It is important to remember that the contents of the various video clips are the same as before.**

**The instructions for the station state that there may be 1, 2 or 3 errors in any single video clip. Three candidates selected more than 3 and, therefore, made their answers for that clip totally invalid. A significant number of candidates also selected only one error for a particular clip when they could have selected up to three and so increase their chances of identifying the error. There is no negative marking of any sort in this station.**

### **STATIONS 5A/6A and 5B/6B**

**The majority of candidates again came well prepared for these two Stations. A minority of candidates revealed similar shortcomings as follows:-**

**Stations 5A/B – NOAH navigation, NOAH audiogram completion and initial programming of hearing aid selected by candidate:-**

- 1. Some candidates did not, as requested by the Examiner, search for a client in the NOAH register based on ‘last name’. Instead, they opened the entire register list and selected the stated client. This loses marks for not following the Examiner’s instructions.**
- 2. With the NOAH audiogram module, when candidates are asked to copy audiometric curves from one audiogram to the other, a minority chose to manually enter each reading. This does not lose marks but is more time-consuming than using this modules ‘copy’ function.**

3. When asked to enter a ‘masked BC no response’ symbol, many candidates correctly use a right mouse click but select ‘no response’ which returns a ‘not masked BC no response’ symbol. The majority of candidates did not realise this and had to be prompted to select the correct symbol and then hesitated before being able to do so. This both loses marks and time.
4. Few candidates had difficulty with the initial programming of their selected hearing aid. However, when asked a question about a feature of the fitting software, answers were often rather vague and lacking in correct use of terminology. The most frequent example was candidates’ explanation of the effect of acclimatisation/experience levels on the initial settings of the hearing aid.

**Station 6A/B – Appropriate solutions to three common problems for new hearing aid users, programming the selected hearing aid based on the chosen solutions and restoring to initial settings before ending the fitting.**

Few problems encountered with the majority of candidates but a minority lost marks when they their chosen manufacturer’s software did not enable them to make changes to the hearing aid’s settings exactly as described for their choice of a most appropriate solution. The correct solution from the multiple choice answer sheet was usually chosen but some candidates mistakenly combined both output limitation changes and alterations to gain rather than just one or the other. Changes to gain or output should be stated in dB rather than as so many “clicks”. When asked how much of a change in dB was achieved by each “click”, a surprising number of candidates did not know.

## **STATION 7**

Analysis of a sample of the candidates’ score sheets showed that the following were common difficulties for candidates at this station:

- Giving poor instruction to the client e.g. failing to advise them not to talk/ cough.
- Not knowing what case history questions are relevant to this procedure. Also not asking if the client wears glasses/ear rings.
- Inadequate description of the view of the outer ear e.g. only ‘normal’ or ‘safe to continue’. To obtain maximum marks, the candidate is expected to give a *full* description of what they can see, noting any special features or problems (and suggesting referral if appropriate).

- **Not checking the ear at the end.**

**The following faults, although less common, were also noticeable (c.10%):**

- **Failure to place the block just beyond the second bend. In extreme cases, placing it very close to the canal opening.**
- **Not bothering with the ‘niceties’ such as good organisation, hygiene *throughout*, clear communication, thinking about the client (not leaving them standing, pleasant manner, etc).**

**A small number of candidates were unsafe. Correct bracing and checking the ear with the otoscope at appropriate times cannot be left out. A candidate must be safe and able to place an otoblock such that it could be used to produce an acceptable impression.**

**Several candidates wanted tweezers. These were used historically as the specula were stored in liquid. This practice has now ceased and it is therefore no longer a requirement to use tweezers.**

<b>Total no of candidates in sample</b>	<b>98</b>
<b>No. giving poor instruction</b>	<b>36</b>
<b>No. not giving full relevant history</b>	<b>49</b>
<b>No. lacking detail in description</b>	<b>47</b>
<b>No final otoscopy</b>	<b>33</b>

## **STATIONS 10 and 11**

**There is not enough time to complete a full blown audiogram, nor is it necessary, for the examiner is totally committed to focusing on correct instructions and performance techniques that meet the BSA recommended procedures.**

**Instructions were presented well although some candidates must learn to project their voice more if full understanding is to take place by the hearing impaired client. Most candidates presented a warm and professional manner and it was noticeable if the candidate was cold and/or abrupt. This must be considered to create the right relaxed atmosphere.**

**The same performance technique problems occurred in these OSPE stations as in the 2006(1) examination – the tone presentations were rhythmical and far too short as were the intervals between the tones. The elimination of the Uncomfortable Loudness Level test has removed pressure of limited time. Candidates should take advantage of this by using BSA recommended procedure that recommends varying the length of presentation and interval to between 1 and 3 seconds – many were less than half a second. It is amazing the difference this makes towards building up a client's confidence, and it gives you a further measurement, by observing whether the releasing of the response button corresponds to the cessation of the tone.**

**Candidates lost marks in both AC and BC testing on their poor presentation.**

**Familiarisation of the tone and masking noise proved to be the biggest loser of marks. Remember, the initial frequency, 1000 Hz, should be presented at a clearly audible level for a longer period than usual and acknowledged by the client.**

**Many candidates established masking threshold by increasing the noise in 5 dB steps from 0 dB without the client knowing what to listen for. It is advisable that the client should be told - 'The masking noise will be presented before the test procedure, just to let you know what you are listening for'.**

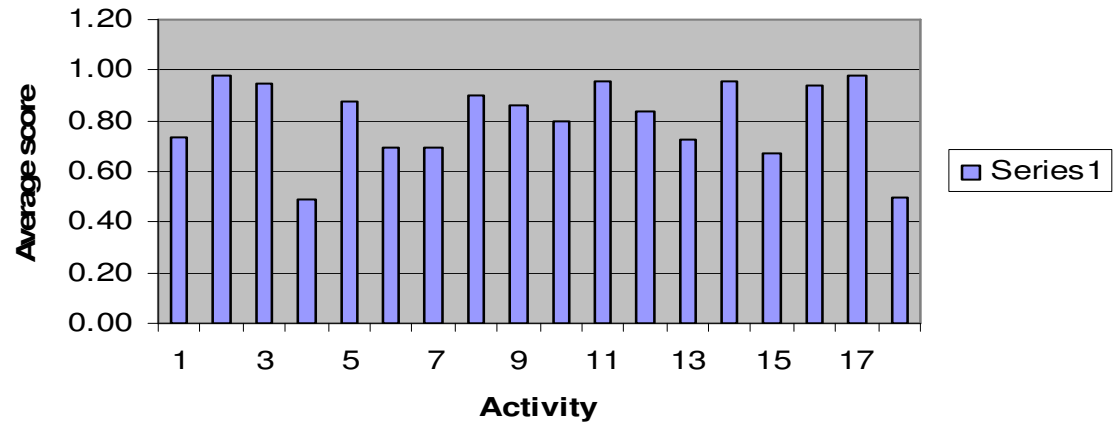
**Candidates correctly acknowledged their use of 'effective masking'. Here, the starting masking output of the AC threshold is checked on the masking chart by the examiners.**

**Activity**

**Instruction complete**  
**AC Placement of headphones**  
**Better ear first**  
**Correct level for familiarisation**  
**+20dB when not heard**  
**Duration of tone presentation**  
**Duration of intervals**  
**Method of finding threshold**  
**Repeat 1KHz for first ear**  
**BC Placement of BC**  
**Worse ear**  
**Duration of tone presentation**  
**Duration of intervals**  
**Method of finding threshold**  
**Check BC has not moved**  
**Completion of Audiogram**  
**Interaction with client**  
**Overall cohesiveness**

**Masking technique was performed well by the majority of candidates or abominably by a few. It could be that nerves played a part. The examiners are aware of this, therefore when a mistake is noted by the candidate and corrected - don't panic! There is still a good chance of passing if no more mishaps occur.**

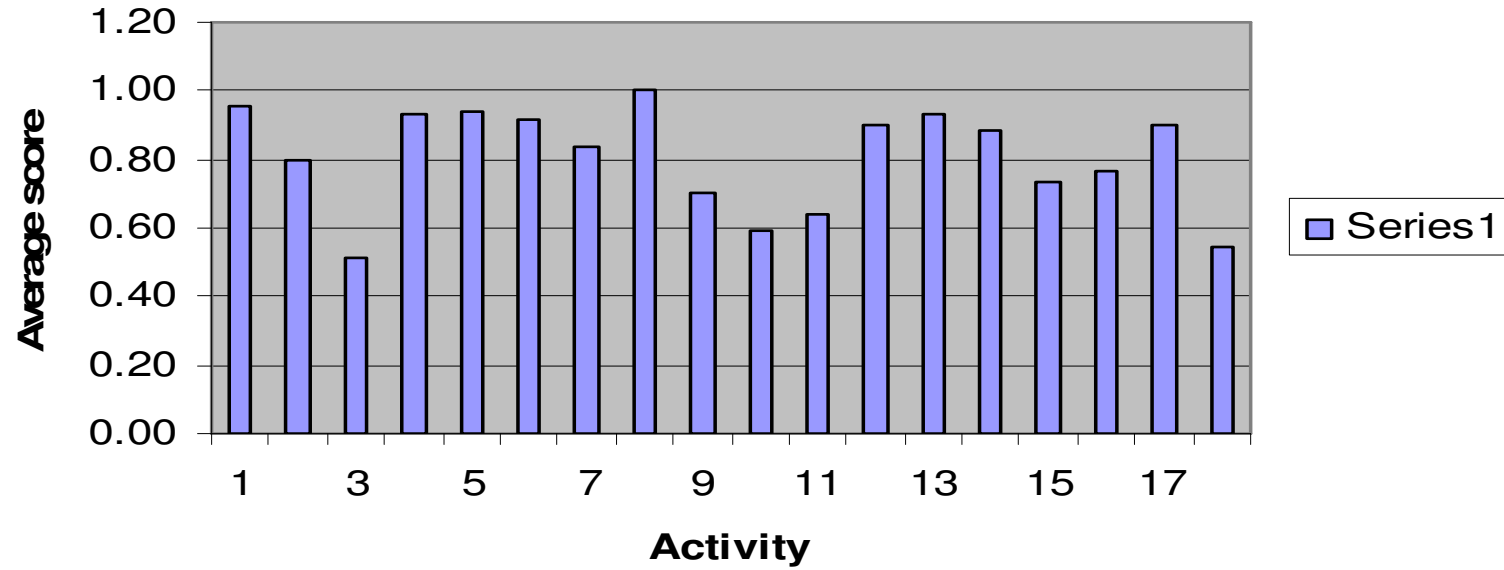
### OSPE 10



## **Station 11**

- 1. Need for masking noted**
- 2. Instruction complete**
- 3. Masking Noise familiarisation**
- 4. Transducer/ insert correctly placed**
- 5. AC or BC establish M**
- 6. Start M+10dB**
- 7. AC or BC threshold re-established**
- 8. Correct increase level of masking**
- 9. Duration of tone presentation**
- 10. Duration of intervals**
- 11. Method of finding threshold**
- 12. Plateau - three consecutive readings**
- 13. Plateau at least M+40dB**
- 14. Masking Chart recorded correctly**
- 15. Check transducer: BC - masking insert**
- 16. Correct masking symbol and plotting**
- 17. Interaction with client**
- 18. Level of control throughout procedure**

# OSPE 11



## STATION 12

**Station 12 was an unmanned station. Almost all the failures were due to retubing such that the aid would have been unusable by a client without further attention.**

**However, this situation did not occur in the resits.**

## STATION 13

**Station 13 – Part1: hearing aid system features and functions of controls.**

**Station 13 – Part2: identification of common faults with hearing aids and their effects on performance.**

**The majority of candidates did well at this unstaffed OSPE Station. Those who did less well simply did not identify correct hearing aid system features in Part 1. In Part 2, lower scoring candidates did not correctly identify a fault and/or did not correctly state its consequence. Stating incorrect vent size and tubing bore were the most common errors in Part 1. Marks were more often lost in Part 2 because the fault must be correctly selected from the multiple choice of answers before marks can be given to the choice of the most likely effect on the hearing aid's performance.**

## STATION 14

**PRIMARY EXAMINATION SESSION (NOV 2006)**

**N = 105 86 candidates passed. Pass rate = 82%**

**83 candidates achieved a pass. A further 3 candidates achieved distinctions.**

**19 candidates failed.**

**This station has been reworked to provide existing film material in a revised format of 7 short video clips instead of ten. Instructions have been simplified and the list of possible errors on the answer grid has been reduce from over 20 choices to 10 choices. There are 3 clips on air conduction testing, 2 clips on bone conduction testing and 2 clips on masking techniques.**

## **OSPE RESITS (JAN 2007)**

**A total of 18 candidates re-sat this station. 16 candidates passed with 2 of these achieving distinctions. Pass rate for resits = 89%**

### **General comments.**

**This is now a well-known station that has not changed over 3 full OSPE sessions. Comments after the first OSPE showed that candidates thought there was too much information presented too quickly in the video clips. Despite these feelings, the pass rate for this station has been high and candidates now seem to tackle this station well.**

**Experiences with this station were used to redesign the format of Station 3 (PTA errors on DVD) so that the format of these two stations are now similar.**

**The instructions for both these stations state that there may be 1, 2 or 3 errors in any single video clip. In Station 14 eight candidates selected more than 3 errors for a particular clip and, therefore, made their answers for that clip totally invalid. Furthermore, in common with Station 3, a significant number of candidates also selected only one error for a particular clip when they could have selected up to three and so increase their chances of identifying the error. There is no negative marking of any sort in this station or in Station 3.**