ST MARY’S UNIVERSITY

TWICKENHAM, LONDON

BSc Health, Exercise and Physical Activity Degree Examination students registered for

Level **SIX**

Title: **Anthropometry**

Code: **HEP6009**

Semester: **TWO**

Date: **January 9th 2019** Time: **9:30 – 11:30 AM**

TIME ALLOWED: **TWO** HOURS

This paper is in two sections:

* **BOTH** sections are **COMPULSORY**.
	+ Answer any **FIVE** questions from **SECTION A**.
	+ Answer **ONE** question from **SECTION B.**

Answer all questions in the answer booklet provided. Any additional sheets should be attached to your answer booklet. Calculators may be used.

**SECTION A** (Answer **FIVE** questions – worth 10 marks each)

1. Using appropriate terminology, describe the International Society for the Advancement of Kinanthropometry (ISAK) procedure to locate the subscapular skinfold site.
2. Discuss anthropometric measures that are useful for evaluating the growth and maturation of children.
3. Discuss the importance of proxemics and haptics when conducting anthropometric profiles.
4. Outline the major sources of measurement error when taking skinfold measurements and discuss strategies that can be used to minimise these errors.
5. Critically discuss one application of large-scale anthropometric data.
6. An anthropometrist has measured the abdominal skinfold of five participants. Using the equation provided, calculate the anthropometrist’s intra technical error of measurement (show your workings)

|  |  |
| --- | --- |
|  | **Participant** |
|  |  **1** | **2** | **3** | **4** | **5** |
| **1st measurement** | 22.6 | 27.0 | 23.2 | 14.6 | 17.2 |
| **2nd measurement** | 25.0 | 27.6 | 20.8 | 16.6 | 17.0 |
| $$Deviation^{}$$ |  |  |  |  |  |
| $$Deviation^{2}$$ |  |  |  |  |  |
| $$\sum\_{}^{}Deviation^{2}$$ |  |  |  |  |  |
| $$\frac{\sum\_{}^{}Deviation^{2}}{2N}$$ |  |  |  |  |  |
| $$\sqrt{\frac{\sum\_{}^{}Deviation^{2}}{2N}}$$ |  |  |  |  |  |



1. The somatotypes of two athletes are provided in the table below. State their somatotype category and critically compare their physical characteristics.

|  |  |
| --- | --- |
|  | **Somatotype** |
| **Athlete A** | 5.0 – 3.1 – 2.0 |
| **Athlete B** | 2.0 – 5.8 – 3.0 |

**SECTION B** (Answer **ONE** question worth 50 marks) –

1. Hydrostatic weighing, air displacement plethysmography and bioelectrical impedance analysis are techniques used to appraise body composition. With reference to literature, critically discuss which of these techniques you favour and explain your reasons why.

**END OF EXAMINATION**