



---

# **EXAMINERS' REPORTS**

---

## **LEVEL 3 CERTIFICATE/DIPLOMA IN MEDICAL SCIENCE**

**JANUARY 2018**

Grade boundary information for this subject is available on the WJEC public website at:  
<https://www.wjecservices.co.uk/MarkToUMS/default.aspx?l=en>

### **Online Results Analysis**

WJEC provides information to examination centres via the WJEC secure website. This is restricted to centre staff only. Access is granted to centre staff by the Examinations Officer at the centre.

### **Annual Statistical Report**

The annual Statistical Report (issued in the second half of the Autumn Term) gives overall outcomes of all examinations administered by WJEC.

# LEVEL 3 CERTIFICATE / DIPLOMA IN MEDICAL SCIENCE

## Level 3

January 2018

### UNIT 2: PHYSIOLOGICAL MEASUREMENT TECHNIQUES

#### Unit 2-Physiological Measurement techniques

##### General Comments

Two centres submitted work for this unit in this series.

The quality of work submitted by one of the centres was very good and assessment by this centre was accurate and in agreement with the moderators.

The other centre had over-graded a number of candidates, often awarding higher band marks where the candidates' work was at best middle band.

For both centres the administrative work was correctly submitted, with authentication sheets signed by the candidates.

##### Activity One

###### Task 1

Candidates need to produce pre-test information for three different tests; one of these tests must be an ECG.

A.C 1.1 should be covered in each piece of pre-test information, as each piece is marked out of a maximum of 6 marks for this A.C (18 marks in total for this A.C). It is important that for A.C 1.1 candidates do not just describe the physiological test, but explain the **principles of how the test works**. So for example with peak flow test, candidates could explain about this test measuring airflow through the bronchi and thus the degree of obstruction, with blood pressure candidates need to explain how the cuff inflates to cut off blood flow, then slowly releases, so that the sensor can accurately record when pressure returns. Explanations for blood pressure should include reference to systolic and diastolic measurements and what these are in relation to cardiac cycle.

###### Task 2

For this task candidates need to produce a plan (A.C 3.1). This plan should be detailed and cover things such as: identification of information to be collected, procedures that will be used, equipment needed, and the location and timing of the test; how/when patients will be informed of when they need to attend, what they should do/not do before the test; any other individuals that need to be contacted - e.g technician, facilities etc.

Although the observation record can also support the achievement and marking of this A.C, it is important that candidates do produce a written plan themselves.

Candidates need to perform a minimum of two tests on at least two patients. The two tests should test two different physiological systems, for example blood pressure test: cardiovascular system, peak flow: respiratory system. Tests such as BMI do not test a specific system and are not listed in the content for this unit (A.C 3.2). Pulse oximetry and blood pressure are a permitted combination of tests.

### **Task 3 and 4**

These two tasks are linked, but it is important to ensure that candidates do cover all the required A.Cs, this includes describing possible limitations of the tests they have performed (A.C 1.3). Candidates should process data from the physiological measurement tests they performed and from the data with which they are provided (ECG trace). With the ECG trace candidates should label the components of the ECG (P, QRS and T) and undertake relevant analysis. They could also comment on the "repeatability" of the two traces provided.

For A.C 4.2 candidates need to provide conclusions which are detailed and are clearly linked to the evidence, this includes comparisons to expected norms and patient history. Candidates need to link their findings to expected physiology and possible pathology.

For A.C 4.4 it is important that candidates use scientific and technical language in the proforma for the head of department (e.g. hypertension rather than high blood pressure).



WJEC  
245 Western Avenue  
Cardiff CF5 2YX  
Tel No 029 2026 5000  
Fax 029 2057 5994  
E-mail: [exams@wjec.co.uk](mailto:exams@wjec.co.uk)  
website: [www.wjec.co.uk](http://www.wjec.co.uk)