



EXAMINERS' REPORTS

LEVEL 3 CERTIFICATE/DIPLOMA IN MEDICAL SCIENCE

JANUARY 2020

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

MEDICAL SCIENCE

Level 3

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PHYSIOLOGICAL MEASUREMENT TECHNIQUES

The work submitted was well organised and generally followed the requirements of the model assignment. Some scripts were of the highest quality and are a real credit to staff and students. Some work was clearly annotated with the assessment criteria and comments, which makes it easy to see why the candidate had been awarded appropriate marks. Scripts with little/no annotation make it difficult to see why marks are awarded.

AC1.1 The learner summary sheet states that “Task 2. Perform physiological measurements. Plan Observation record. To obtain maximum marks, two tests from two bullet points from unit content must be performed (i.e **tests from two different systems**: for example blood pressure [cardiovascular] and peak flow [respiratory]).”

LO2 states that candidates must understand how to deal with patients, with AC2.1 stating that they must **explain** the importance of patient confidentiality and similarly AC2.2 asks them to **describe** conduct towards patients. Thus a candidate cannot gain a band 3 mark for AC 2.1 and 2.2 if the **only** evidence is a comment by the assessor on the observation record. This assessor record should simply be an acknowledgement that the plan, explaining the importance of confidentiality and the description of appropriate conduct towards patients, has been carried out satisfactorily in a real-life patient situation.

The same is true of AC3.3. It would be expected that the candidate would have already drawn up a table in which to enter the data as it is collected from the equipment on the day. The table should have all data recorded legibly with correct units in headings, not in the body of the table, and with appropriate repeats and precision. Photocopies or photographs will suffice as evidence, but assessors’ comments alone will not gain band 3.

Patient questionnaires are excellent evidence, but there must be a question with reference to male/female, so that the assessor/moderator can see that account has been taken, by the candidate, of the difference in the relevant normal values with respect to results obtained.

AC3.1 states “Plan to perform physiological measurement tests. **Key aspects of plan** • identifies information to collect • procedures and equipment • location • timing • informing individuals. **Procedures and equipment** • identifies procedures • informs technician of required equipment and times. **Informing individuals** • patients • other personnel affected (e.g. facilities).” Thus a candidate who only plans the **procedures** with no reference to all the other factors which need to be covered cannot be a top band for AC3.1.

MEDICAL SCIENCE

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MEDICAL SCIENCE RESEARCH METHODS

Two centres submitted work for this session.

Administrative work was correct, with authentication sheets signed by candidates. The quality of the work submitted was generally good and assessments by the centres were, in the main, accurate and in agreement with the moderator.

There was a pleasing improvement in the explanation of terms used in data analysis and the use of mathematical notation for ACs 3.1 and 4.4.

Candidates continue to experience the greatest difficulty in achieving ACs 3.2 and 4.1. To help rectify this, candidates need to consider carefully the hypothesis for their investigation in which the one independent variable is clearly stated. The research questionnaire should then be designed with the hypothesis in mind avoiding the use of irrelevant questions. Too many irrelevant questions will prevent candidates from accessing band 3 for AC 2.2. The style of questions should allow quantitative data to be collected which can then be analysed. Care is needed here that the correct statistical test is selected for the type of data collected and not just applied to random data in order to include a statistical test in the analysis. Whilst the use of an appropriate statistical test is needed to achieve band 3 in AC4.1, candidates can still access bands 1 and 2 by calculating mean values and standard deviation.

Further help may be found in the 'Guidance for Teaching' document.

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MEDICINES AND TREATMENT OF DISEASE

Introduction and General Comments

Unit 4 is an internally assessed unit that is worth 50% of the second-year marks. It is split into three tasks. Each task allows candidates to communicate in different ways that are appropriate for their audience.

Candidates are expected to complete two presentations to hospital staff about the administration and effects of medication in task one. Task two expects candidates to produce information for patients about four different medicines and task three is information about cancer, causes of cancer and treatments.

4 centres submitted work for unit 4 in this series. Some centres were submitting this unit for the first time.

Clear and detailed annotation would have aided the moderators in some cases. Some centres produced consistently good work and these centres accurately applied the marking guidance and provided helpful annotation on the work.

All centres submitted the correct administrative documentation and all centres included authentication sheets signed by the candidates. The mark record sheets were correctly completed by the majority of centres.

Centres are advised to refer to exemplar work on the WJEC secure website especially for task 2 as the leaflets have been presented in a straightforward and effective way that allow candidates to access all marking criteria.

Any work seen to have been copied or plagiarised will be brought down to Band 1 as this shows that candidates do not have a level of understanding of the work which would allow them to access any further marks. Candidates should be reminded that work should not be copied from any resources and that all work submitted should be original.

Task Specific Comments

Task 1

The quality of presentations was very high with many candidates scoring almost maximum marks for this task. Observation records were completed well by the majority of centres although a small number of centres are still not including relevant statements from the specification as justification for the marks awarded or the speaker notes from the candidates.

For future submissions centres must include the following documents along with a completed observation record: **a copy of the presentation material (one per group is sufficient), the candidates speaker notes (if applicable) and a reflective account from each candidate outlining their contribution to team work.**

Task 2

It was clear that some centres struggled with completing this task. The quality of work here was varied. Some centres seemed to have grasped what is needed to be able to award the top band marks but other centres were over-generous when marking.

For this assessment it is important that all four of the leaflets show evidence of each of the ACs for the task. Many of the assessors were overly generous especially with the following ACs:

- **AC2.2-** candidates need to explain how medicines affect **body systems**. In many cases the body system was not named. This restricts marks for the candidate as simply stating an organ or area of the body is not sufficient.
- **AC2.4-** it is possible for candidates to explain how many medicines, not just antibiotics, may lose their effectiveness and this would be expected when awarding band 3.
- **AC2.5-** many candidates gave a list of the medications that interact with the named medicine, this is not sufficient for band 2 or 3 marks. Candidates should **explain** how these medications interact with the named medicine.
- **AC2.7-** a simple list of side effects is not sufficient here, yet many centres were awarding high marks for these. Candidates need to **explain** how the adverse reaction to the medication has occurred within the body and should give examples.

Some candidates did not include a justification of the method used when presenting Task 2, AC4.2. This must be present in order for candidates to be awarded any marks for this AC. Again, there is no mark awarded if the candidate does not include this in the work, yet centres were still awarding high marks with no evidence.

Task 3

Many centres presented acceptable work for task 3 and this was assessed appropriately using the marking guidance. Again however, in some of the centres the assessors were overly-generous in their marking.

For AC3.1, candidates were awarded band 3 marks for work that did not contain all the necessary information describing the term cancer. As this AC is only worth 4 marks it is important that all aspects of the work are included. Any omissions should then lead to a decrease in the mark awarded. See the specification for the level of detail needed here.

Generally, AC3.2 was completed and assessed well with candidates explaining the genetic basis of cancer clearly and the work being assessed in accordance with the marking guidance.

AC3.3 allows candidates to access high marks for descriptions of possible cancer treatments. This was, again, done well by the majority. It is worth noting here that in order for candidates to access the band 3 marks they do need to include information about all treatment options included in the teacher guidance. These should be described to a sufficient level of detail for the band 3 marks and again any omissions should result in a decrease of marks awarded.

Many centres struggled with AC3.4 as candidates **must** include an assessment of the potential impact of new treatments for cancer, not a simple description of the treatment. Some assessors awarded marks for descriptions of the treatments with no assessments of their impacts - this is incorrect and if candidates have not made an assessment, they cannot access these marks.

Summary

In summary, task one was of a high standard with the majority of centres providing the correct documentation and applying the marking guidance correctly.

Task two varied across centres. Marking tended to be over-generous with a lack of annotation.

Task three tended to be done well with most centres understanding the brief here.



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