

Cambridge Technicals Level 3

Sport & Physical Activity

05826-05829 & 05872

Unit 1 Body Systems and the Effects of Physical Activity

OCR Report to Centres June 2018

About this Examiner Report to Centres

This report on the 2018 Summer assessments aims to highlight:

- areas where students were more successful
- main areas where students may need additional support and some reflection
- points of advice for future examinations

It is intended to be constructive and informative and to promote better understanding of the specification content, of the operation of the scheme of assessment and of the application of assessment criteria.

Reports should be read in conjunction with the published question papers and mark schemes for the examination.

The report also includes links and brief information on:

- A reminder of our **post-results services** including **reviews of results**
- Link to **grade boundaries**
- **Further support that you can expect from OCR**, such as our CPD programme

Reviews of results

If any of your students' results are not as expected you may wish to consider one of our Reviews of results services. For full information about the options available visit the [OCR website](#). If University places are at stake you may wish to consider priority service 2 reviews of marking which have an earlier deadline to ensure your reviews are processed in time for university applications: <http://www.ocr.org.uk/administration/stage-5-post-results-services/enquiries-about-results/service-2-priority-service-2-2a-2b/>

Grade boundaries

Grade boundaries for this, and all other assessments, can be found on the [OCR website](#).

Further support from OCR



Attend one of our popular CPD courses to hear exam feedback directly from a senior assessors or drop in to an online Q&A session.

<https://www.cpdhub.ocr.org.uk>

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Unit 1 Body Systems and the Effects of Physical Activity

1. General Comments:

In this examination series, candidates were well prepared for questions on most aspects of the specification, although some candidates were less well prepared for questions on different types of muscle contraction and the mechanics of breathing.

Most candidates managed their time effectively with only a few running out of time to complete the paper.

The multi-choice questions at the beginning of the paper was less well answered in this series.

Some candidates are not reading each question carefully enough and are making mistakes on understanding the requirements of the question – especially the multi-choice section and for Section C – the extended question.

The most demanding parts of the paper for many candidates were questions 7, 9, 14, 15, 16b and 21.

2. Comments on Individual Questions:

Section A

Questions 1 – 10.

Questions 1 – 8 were multi-choice type questions.

The questions that proved the most challenging were questions 7, 9 and 10.

Candidates are advised to read each question and all of the possible answers carefully before committing to a particular answer and not to rush through this section. Candidates are advised to look for and/or highlight key words in each question.

Q3 and Q8 produced a higher success rate than other questions.

For Q7, candidates consistently struggled to select the correct answer with 6 or 12 hours being selected more frequently.

Q9 was often poorly answered, most candidates could recognise how to work it out but did not indicate the correct units or used incorrect units. Very few students got a mark here. The most common answer was 6 on its own with no units included. Candidates are reminded that if a calculation is required then the units must be stated clearly and accurately.

Q 10 was again not well answered, some students wrote spinal cord, chord or code which was accepted, but the vast majority were well off the mark with answers like kidneys, intestines, lots of spine, heart and major organs mentioned.

Candidates are advised to re-visit these multi-choice questions again if they have time. Very few again scored 10/10 for the multi-choice section.

Section B

Question No. 11

In Q11a, the majority of candidates found success on this question, especially for B, C, D. Radius was however a common incorrect answer for A, instead of Ulna.

In Q11b, a high percentage of candidates found success on this question, for both the type and function of the bone.

Question No. 12

This was answered generally well for the elbow joint, as most candidates recognised flexion and the bicep. Very few however wrote wrist extensor, the most common answer here being wrist flexors.

Question No. 13

Most candidates scored well on this question, usually stating cartilage as a shock absorber or reducing friction and synovial fluid as a lubricant of the joints. A minority did not attempt to give an answer for both the articular cartilage and synovial fluid.

Question No. 14

In Q14a, candidates consistently failed to identify the knee agonist and antagonist, with a high percentage of students stating hamstring and quadriceps instead of one of the specific muscles within. Candidates consistently failed to identify the Hip antagonist (Iliopsoas) however the hip agonist (Gluteus maximus) was usually answered correctly. 1 -2 marks were more commonly awarded.

In Q14b, a high number of candidates explained the role of the fixator muscles well, normally using the term 'stabilising'. Candidates often failed to give a correct example for the second mark, stating incorrect muscles, or more frequently not highlighting how the muscle stated helps within the movement e.g. the rectus abdominis/erector spinae helps to stabilise the spine within the squat.

In Q14c, some candidates were able to define each type of contraction, but frequently, when marks were not awarded, it was commonly due to candidates not highlighting the importance of muscle length, often stating size or expanding.

A bicep curl was often used as a correct answer when discussing an eccentric contraction which was generally answered correctly.

Candidates struggled to give a correct example of an isometric answer. Those that did, normally gave a correct example of a movement (such as a crucifix in gymnastics) but failed to state the name of a muscle involved.

Question No.15

Many candidates failed to identify any structural characteristics of fast glycolytic fibres, often giving functional characteristics instead, such as fatigues quicker, instead of a structural characteristic such as large (in size).

Question No.16

In Q16a, there was a mixed bag of responses. Candidates had a high success rate identifying 'lungs' and 'left atrium', but struggled more frequently with the correct vessels.

In Q16b, candidates often struggled to gain higher marks on this question, normally being awarded 0-1 marks. Candidates often failed to state 'muscle' or 'heart' to gain marks when discussing size/hypertrophy or efficiency. Very few candidates highlighted lower venous return as a possible reason. Stroke volume was explained frequently without actually using the technically correct term 'stroke volume'.

Question No. 17

A high number of candidates successfully completed the table shown in the question, normally attracting 3-4 marks. Red blood cells and plasma were more consistently correct with points generally being dropped due to poor wording or incorrect functions that could not be awarded a mark, normally for the function of platelets.

Question No. 18

The majority of candidates successfully selected all 3 correct words; no patterns were evident when incorrect. A minority of candidates failed to distinguish that the 2 words on top of each other in the options box were actually 2 separate options to choose from. For example, they had written oxygenated haemoglobin as one answer instead of just oxygenated.

Question No. 19

The majority of candidates successfully labelled all 3 structures. Trachea was generally correct for A. B was often highlighted as bronchus or bronchi instead of bronchioles. C was generally correct.

Question No. 20

In Q20a, candidates were mostly awarded the full 3 marks for the question. ATP-PC was usually the answer for the energy system when incorrectly answered. A small percentage of students

thought they had to choose between chemical **or** food as the options to answer in the second box. The by-product was generally correctly answered.

In Q20b, candidates were again generally awarded the full 3 marks for the question. When incorrect, javelin and 1500m race were at the wrong end of the scale, highlighting candidates' misunderstanding of the terms aerobic and anaerobic.

Question No. 21

This ten-mark question is marked using a levels response mark scheme with descriptors that enable examiners to pinpoint a mark from the responses they read.

Only a small minority of candidates were awarded 0 marks for this question. The question was attempted by most candidates.

Candidates normally discussed the actions of the diaphragm and intercostal muscles correctly to gain marks from the higher end of Level 1. When the diaphragm and intercostal muscles were discussed correctly, most candidates were able to apply the knowledge to the changing volumes and pressures during inspiration and expiration.

Fewer candidates were able to identify additional muscles when exercising, usually stating that breathing rate increases as the only additional point during exercise. When additional muscles were discussed, some candidates failed to distinguish between those used for inspiration and expiration and their specific roles. When candidates discussed correctly, they were then able to discuss the differing volume changes and pressures when exercising compared to rest.

Very few candidates discussed the concept of active and passive processes. When candidates received lower marks they had often discussed the path air taken when breathing in and out, discussing its passage through the nasal cavity, trachea, lungs, diffusion etc. instead of the **mechanics of breathing**.

The accuracy of spelling and grammar were generally better this series and candidates often structured their work very well and showed planning beforehand.

This extended question is also assessed on the quality of written communication and the better responses again showed a fluent and accurate approach, with few spelling errors and with good use of clear sentences and paragraphs. Weaker candidates again showed poor structure and accuracy in spelling.

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