



GCSE

Physical Education

8582/1 The human body and movement in physical activity and sport

Report on the Examination

8582
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GENERAL COMMENTS

Students found this paper very accessible and consequently the mean mark was higher than in previous years.

There was no evidence that students did not have sufficient time to complete the examination.

It appeared that many centres had clearly done a lot of work on the command words and assessment objectives to enable students to achieve higher marks than in previous years. However, some students still struggle to interpret some of the key command words used in this year's questions, therefore not hitting the relevant assessment objectives in their responses. This was particularly true in questions 11 and 14 which required the students to justify. On too many occasions the students merely stated a response where an explanation was required. This is a key area that centres need to address for future years as it can have a significant impact on marks for the AO2 and AO3 questions.

QUESTION 1-5

Overall, the MCQ's were answered very well.

QUESTION 6

The definition of health was not well answered, students often only mentioned 'physical and mental well-being', not including 'social' therefore giving an incomplete definition, which could not be credited. Some students just stated health was having a good diet and plenty of exercise, again a response that was not creditworthy.

The fitness definition was mostly a creditworthy response, with most students stating, 'meeting the demands of the environment'. Some students just stated, 'meeting the demands of sport' or 'keeping your body in good shape' which was not given credit.

QUESTION 7.1

This question was not as well answered as anticipated, and spelling was often poor (but credited). Most students were able to identify the latissimus dorsi, many the tibialis anterior but the hip flexors were commonly wrongly identified as calf muscle/quadriceps/hamstring.

QUESTION 7.2

Cranium and vertebrae were correctly named by many students, however responses of 'spine, jaw, and skull were common and not accepted. Similarly, the sternum and scapula were often incorrectly given as being in the head/neck.

QUESTION 7.3

This question was attempted by most students, with most gaining at least one mark. The mention of 'tendons attaching muscle to bone' was where most students gained their mark. Students providing stronger responses also developed the answer, with the mention of muscles working in antagonistic pairs. Some responses just mentioned that muscles can contract and relax, which was too vague to credit.

QUESTION 8

This was a well-answered question with most students identifying the correct chambers of the heart and sequence of blood circulation.

Those students that failed to gain marks, and were mostly awarded zero, named the order of left and right incorrectly (they put right for A/B and left for C/D).

QUESTION 9

Students tended to state the characteristics of the structure of either veins or arteries, referring to the differing lumen size, depth of the wall and presence/absence of valves. There was a lack of explanation of the impact on the marathon runner's performance.

Stronger responses, where the students did make mention of veins vasodilating to allow oxygen to the working muscles, still did not always link this to how this allows the runner to complete a marathon.

Similarly with veins, stronger responses explained the returning of deoxygenated blood back to the heart; and a few students mentioning the lungs. Again, many students just repeated the question, 'to complete the marathon' without explanation therefore not gaining the second mark.

QUESTION 10.1

Most students gave the correct response of extension. The common incorrect answer was stating the joint involved eg hinge joint.

QUESTION 10.2

Most students gave the correct response of triceps. The common incorrect answer was biceps.

QUESTION 10.3

This question was often answered incorrectly with the student's stating eccentric or frequently leaving the answer space blank.

QUESTION 11

Most students achieved the AO1 mark, identifying either muscular endurance or dynamic strength correctly. The incorrect type of strength stated most frequently was explosive strength.

The students that identified muscular endurance were mostly correct in their justification, relating to the ability to perform repeated muscular contractions, however few responses mentioned that it would help delay the onset of fatigue. This did not stop them from accessing the mark as students were credited if they referred to the repeated muscular contractions or similar.

QUESTION 12.1

Most students attempted this question with a high degree of success. The most common correctly identified components of fitness were muscular endurance, strength and power.

The most commonly incorrect identified response was cardiovascular endurance.

QUESTION 12.2

Students answered this question very well, with a high percentage achieving the maximum 3 marks.

Warm up and cool down being stated by most students. Some students also stated stretching as a separate way, but unfortunately if they had already stated warm up this did not gain them an extra mark as it is considered an integral part of a warmup.

Some students were more specific in their responses stating that minimising the risk of injury when weight training required the lifting of appropriate weights and using the correct technique. Many others also mentioned having the correct equipment/kit and the need for spotters.

QUESTION 12.3

This question was not answered well by most students. The students often failed to ‘discuss’ and only gave why weight training was beneficial to games players, therefore only accessing a possible three marks.

When explaining the benefits of weight training, students related the same benefit to different games eg developing explosive power, to speed in football and rugby (which became repeats of the mark, and only allowed them to gain one possible mark).

The other main weakness in answers was that students failed to answer with AO3 and not applying the effectiveness of weight training to an aspect of play, eg muscular endurance can help a rugby player to perform repeated tackles in the game.

Other reasons that students failed to gain a mark was linking the effectiveness of weight training to a non-games activity or referring to cardio-vascular endurance.

When discussing ‘against’ the effectiveness of weight training for a games player, the strongest responses were relating to the fact that good cardiovascular endurance is required in most team games and weight training is not a suitable training method to develop this component of fitness, with students suggesting alternative training types/methods.

The other ‘against’ point that students clearly understood was linked to the lack of improving the required game skills with weight training. Some students also considered that weight training could potentially cause injury, but did not explain why or apply this to any game playing outcome.

QUESTION 13.1

Most students attempted this question. A common definition given was a description of ‘pointed toes’. Students relating to extension or increasing the angle at the ankle was only given occasionally, the sporting examples given often referred to ballet poses or gymnastics moves.

Weaknesses in responses where students did not identify the joint (or body part) that was performing plantar flexion therefore the example lacked clarity, in most of these responses the definition was either incorrect or absent.

Many students gave ‘pointing toes’ as both definition and example.

QUESTION 13.2

Most students attempted this question, with a good percentage giving the correct definition, of ‘movement towards the midline of the body’. The most common incorrect response was defining abduction.

Examples however were not always correct, or lacked identifying the phase of movement/body part that was performing adduction.

The most common correct answer was the downward phase of a star jump. However, this example was sometimes given without mention of the arms returning to the body or downward phase, therefore not achieving a mark. The most common incorrect example given was bending the arms when catching a ball (flexion).

QUESTION 14

In this question the students struggled with the definition and some did not relate their justifications to a hockey or football player.

It is important that centres stress the importance of students learning definitions for all components of fitness. The definition was often referring to being still/steady in one position, hold a position, not falling over or doing something equally with both sides of the body. Other definitions mentioned midline (previous question) Eg still around the midline.

There was some mention of centre mass in responses but only a small percentage linked this with the correct definition; others however just stated such things as controlling your centre of mass, or repeating the question, by writing ‘balancing over your centre of mass’.

When linking responses to a football or hockey player, correct examples mostly referred to enabling better /shots to be more accurate/powerful or not falling over in tackles. Maintaining control of the ball when dribbling was another common response.

Many students referred to the goalkeeper needing good balance to dive and save goals; however, there were far greater number of students that failed to justify (AO3) how good balance impacted on a player’s performance. Students just giving responses that good balance is needed when dribbling or shooting at goal did not merit a mark.

QUESTION 15

Most students attempted to complete the graph. The common reason for not achieving full marks was the lack of drawing a line to link the plotted points (therefore not drawing a line graph).

Some students that did draw the line did not do this through each of the plotted points (it was a straight line from zero to the final plotted point. A small number of students did not label the axes.

There were far fewer bar charts (block graphs) this year but still the quality of line drawing is poor eg wavy lines between plotted points.

QUESTION 16.1

Most students attempted this question. The main issue with student's responses was that many did not seem to know the difference between the three levels of the effects of exercise (immediate/short/long). Many students gave a mixture of effects from differing levels. The most common effects identified incorrectly were the immediate term ones, such as increased breathing rate or heart rate.

Students that correctly stated short term effects mostly identified fatigue, light-headedness or the onset of DOMS or cramp.

QUESTION 16.2

Most students attempted this question, with a good level of success in achieving at least 3 marks. Where students failed to achieve higher marks they only stated the way and failed to explain the why or reason for undertaking the stated way.

The most common response was 'ice baths' that help to avoid DOMS or remove lactic acid. Another common response was massage to loosen/relax the muscles or prevent muscle soreness. Many students also gave drinking water, but they sometimes struggled to correctly explain this would replenish lost fluid.

Some students did not read the question correctly and gave reasons why a cool down or stretching helped recovery from vigorous exercise.

QUESTION 17

Although there were many scripts where students did not attempt this question, it was answered better than in previous papers with a high percentage achieving two marks. The most common incorrect responses occurred when the students had transposed the plane and axis responses.

QUESTION 18.1

Nearly 70% of students answered this question correctly. It is a common question theme and it appears centres have taught this in more detail this year.

QUESTION 18.2

As this part could not be marked if the incorrect lever had been identified in 18.1, there were a lower percentage of students gaining full marks. The main issue was incorrectly drawing the effort arrow upwards not downwards.

QUESTION 19

Most students achieved Level 2 for this 6-mark question.

Responses that gained marks at Level 3 identified three different types of bones and clearly understood how each type helped a sports person. The most successful responses used rugby players, analysing how flat bones provided protection to the brain when being tackled, therefore preventing injury.

Students at this level also recognised that short bones helped in putting spin on the ball with the fingers when passing, or long bones allowing good speed when running around the pitch.

At Level 2, students were less likely to always successfully show how the various bones helped the performance of skills. Again, the knowledge and application of flat bones was the best of the responses. In analysing short bones, students often selected darts players throwing the dart as an example of the use in sport of short bones.

Level 1 students where they did identify correctly a bone type, tended to mention long bones that helped players to run or throw. These responses often did not identify a type of bone but just gave examples, the most common being legs or arms. They were also not able to show how the bones had an impact on performance.

Some students did give irregular bones (not in specification) as a type and identified the vertebrae and explained that these bones protected the spinal cord.

QUESTION 20

Most students achieved Level 2 for this 9-mark question.

It was evident that some students did not really understand the way in which plyometrics is conducted. They would describe doing different exercises at various stations, for different body parts, which tended to be relating to circuit training.

Level 3 students obviously understood the ‘bounding’ nature of jumping on/off boxes/platforms, they linked this with the three phases of the triple jump and how it would help improve power in the legs.

When evaluating this training method, Level 3 and 2 responses also explained that because of previous knee injuries and age, this method of training would have to be carefully monitored or was possibly an unsuitable method due to the constant impact on the knees. The stronger responses also gave alternative suggestions, such as undertaking circuit training, where the pressure was not constantly on the knees.

Students whose responses were at Level 1 appeared to concentrate more on the issue of ‘age’ and those that appeared to understand the nature of plyometrics just stated was it was an unsuitable training method. There was little or no mention of why plyometrics would benefit a triple jumper, therefore no application. At Level 1, students also suggested that the amount of training undertaken must be suitable for a 52-year-old, such as ‘must not do too much training as he is old’. Additionally, students at this level rarely mentioned alternative types of training that could be beneficial/suitable.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the [Results Statistics](#) page of the AQA Website.