

**CCEA GCSE Physical Education (Legacy)
Summer Series 2018**

Chief Examiner's Report and Principal Moderator's Report

physical
education

Foreword

This booklet outlines the performance of candidates in all aspects of CCEA's General Certificate of Secondary Education (GCSE) in Physical Education (Legacy) for this series.

CCEA hopes that the Chief Examiner's and/or Principal Moderator's report(s) will be viewed as a helpful and constructive medium to further support teachers and the learning process.

This booklet forms part of the suite of support materials for the specification. Further materials are available from the specification's microsite on our website at www.ccea.org.uk.

Contents

Component 1	Developing Knowledge, Understanding and Skills for Balanced, Healthy Lifestyles and Participation in Physical Activities	3
Component 2	Developing and Maintaining a Balanced Healthy Lifestyle	8
Component 3	Individual Performance in Physical Activities	9
Contact details		13

GCSE PHYSICAL EDUCATION (LEGACY)

Chief Examiner's Report

Component 1 Developing Knowledge, Understanding and Skills for Balanced, Healthy Lifestyles and Participation in Physical Activities

The range of questions in the 2018 paper ensured accessibility for all candidates. Almost all candidates attempted all of the questions within the allocated time. All candidates appeared to have enough time to complete the paper. The level of language used in the examination paper was candidate friendly, appropriate and appeared to be clearly understood. Overall, the paper was effective in differentiating between the wide range of abilities of the candidates entered. Questions ranged from basic recall of subject content, to questions requiring use of higher order skills where application of knowledge, analysis, interpretation and evaluation of information relating to the subject content are required. Candidates were well prepared by centres and many demonstrated a sound knowledge base. This was particularly evident in answers for questions that required recall of concepts, facts, terminology, principles and methods. However, when the candidate was required to apply their knowledge and understanding to given scenarios or use their knowledge and understanding to analyse and evaluate given scenarios not as many could do this effectively. Many communicated their answers clearly and concisely with the appropriate use of technical terms, but some struggled to put their answers into a meaningful written form. The points made below on specific questions may be helpful in preparing future candidates for the written examination paper.

- Q1 (a) & (b)** This question was answered well with candidates providing a wide range of acceptable answers.
- Q2** Answered well, most candidates choose the two correct terms.
- Q3 (a)** Answered well, most candidates provided a clear and full definition of motivation.
- (b)** Answered well, only a very small number of candidates provided examples of intrinsic motivation leading to the loss of marks.
- Q4** The majority of candidates scored four or more marks in this question, with many attaining full marks. Some provided simplistic answers for owned and funded by which, if appropriate, were acceptable. For example, 'individual' was an acceptable answer for the private sector being owned by. However, candidates did not always explain clearly the difference in purpose of the public and private sector sport facilities.
- Q5** Nearly all candidates correctly selected proteins as the component of a balanced diet which should form 10-15%.
- Q6** Candidates demonstrated a clear knowledge of the functions of fats in a diet, leading to this question being answered well. A small number of stated 'a secondary source of energy production' but they were clearly asked to state one other function of fats in a diet.

- Q7 (a)** Most candidates correctly selected carbohydrates as the component of diet that a marathon runner may adjust to improve performance leading up to the event.
- (b)** Many candidates scored two marks in this question; in the simplest form these were attained by the candidate identifying the need to eat more carbohydrates a few days before the event, to give the athlete more energy. Only some candidates stated that the athlete should restrict the intake of carbohydrates in the week leading up to the marathon to lower their body of this source of energy before overloading takes place.
- Q8** When answering this question some candidates did not state the effect that alcohol would have on performance. For example, some provided 'balance' as an answer with no clarification of the effect on performance. To attain the mark candidates had to provide the effect, for example, 'loss of balance'. A small number of candidates stated 'poor coordination' but they were clearly asked to state two other effects that alcohol could have on performance.
- Q9** This question was well answered. Candidates stated clearly a benefit, for example, 'improves social health', before providing an explanation why this happens, for example, 'because you are meeting up with other people'.
- Q10 (a)** Answered well with 'enables muscles to contract and relax quickly' being the typical answer.
- (b)** Many candidates answered this question poorly. Gender, genetics and obesity were the most common right answers provided. Many stated 'height' or 'weight' as a factor with not enough clarification to be awarded a mark. A small number of candidates stated 'age' but they were clearly asked to state two other physical factors that may determine a person's muscular speed.
- Q11 (a)** Answered well, nearly all candidates identified 'aerobic' energy production as being more important for a health-related exercise programme.
- (b)** Some candidates defined aerobic energy production but did not explain why it was more important for inclusion in a health-related exercise programme in comparison with anaerobic energy production.
- Q12 (a)** Nearly all candidates identified continuous steady pace as the training method.
- (b)** The majority of candidates correctly focused on the athlete exercising until the heart rate reached the desired intensity of 70% MHR and it was maintained at this intensity for 25 minutes. Only some candidates identified that the athlete was working continuously with no rest/recovery periods. Some candidates simplistically stated the latter point, for example, 'the athlete worked continuously' but this was credited.
- (c)** Most candidates answered this well by giving a clear explanation of how variety could be included in the athlete's training to maintain interest for example, 'change the type of exercise' and gave an example of how this could be applied, for example, 'swim instead of run'.
- Q13 (a)** Nearly all candidates correctly identified interval training as the training method.
- (b)** Most candidates answered this well. The most common answers identified that the ratio between the work-time and the recovery time was 1:4, typical for anaerobic training where the recovery time is at least four times longer than the work-time. There were only four repetitions which would indicate that they must be working hard, over 90% MHR and completing 100m in 14 seconds would involve working at a very high intensity/sprint.

- (c) Many candidates answered this poorly, with few attaining three marks. Many failed to show an understanding of the difference of an athlete working anaerobically and aerobically. An example of this was shown when some candidates stated a time of '56 seconds' being suitable for the athlete to complete the 400m repetition. This was a multiplication by four of the athlete's 100m repetition time when they were expected to be working above 90% MHR, compared with working between 70-90% MHR in the 400m repetitions. Some also incorrectly reduced the number of repetitions to be completed when working aerobically.
- Q14 (a)** Most candidates identified the principle of training as 'reversibility'. A small number of candidates wrongly stated that 'peaking' was in evidence in weeks 6-12.
- (b)** The question asked the candidates to use specific evidence to justify their choice of principle of training, although many candidates did state figures from Figure 2 they did not use this information to justify how this related to the principle of reversibility. Figure 2 shows the relationship between a person's development of strength in Kg over a 12-week training programme. Candidates were expected to identify that in the first phase of the training programme, weeks 1–3, the training was very effective as their strength developed from 80kg to 150kg. In the second phase of training, weeks 6–12 were not effective as the person's strength went from 150kg to 110kg. Some candidates did explain that biological adaptations produced by the body were reversed in the second phase of training, resulting in the person losing physical fitness in strength and they were awarded a mark for this.
- Q15** Nearly all candidates selected 'D' as the statement which best demonstrated the training principle of specificity.
- Q16** Some candidates chose to use the words 'rest' and 'recovery' in their answers without stating the benefits of planning these into a training programme to improve performance and therefore did not attain marks. There was a wide range of acceptable answers provided by candidates with the most typical being 'allows the body time to repair damage caused by training'; 'prevents injury'; 'allows muscles the time to adapt, grow, get stronger'; 'prevents fatigue'; and 'maintains motivation'.
- Q17 (a)** Nearly all candidates placed the heart rate values correctly.
- (b)** Most candidates explained that the working heart rate would be the highest as the heart had to work harder to supply more blood carrying oxygen to the working muscles. Some candidates just repeated the answer from Part (a) that it was the highest value, with no explanation as to why and therefore were not awarded a mark.
- (c)** Again, some candidates just repeated the answer from Part (a) that it was the middle value with no explanation as to why and therefore were not awarded any marks. Better answers referred to a person's recovery heart rate being higher than resting heart rate as there has been insufficient time for it to return to resting heart rate as the body is still repaying the oxygen debt and a person's recovery heart rate will be lower than working heart rate as the heart will not have to beat as fast as when they were exercising.
- (d)** Nearly all candidates stated that the resting heart rate would be lower in a person whose aerobic exercise was effective.

- Q18** Some candidates did not answer this question well, for example, they described the multi-stage fitness test. Candidates who did answer this question well identified counting the number of repetitions of a particular exercise, for example, press ups, in a fixed time or until failure.
- Q19** This question asked the candidates to state three physical changes that take place in the skeletal muscles as a result of regular and appropriate aerobic training. Some candidates demonstrated an excellent knowledge of the physical changes that occur in the muscles and how this helps improve performance using a high level of specific terminology, attaining the six marks. However, some candidates wrongly identified the physical changes that would occur on the skeletal system and were awarded no marks.
- Q20** Most candidates answered this well by stating four different reasons why it is important for the health and safety of all those involved in a physical activity to abide by rules and codes of behaviour. There was a wide range of acceptable responses to this question. However, some repeated prevent injury for all four reasons and therefore only attained one mark.
- Q21 (a)** Most candidates answered well with the most common answers 'prevent injury'; 'mental preparation'; 'stretch muscles'.
- (b)** Many candidates identified clearly what was wrong in each of the phases and explained what should be included instead. Some identified what they found wrong but did not provide a recommendation of what should be included.
- (c) (i)** Most candidates answered well with 'prevent future injury'; 'prevent muscle soreness'; and 'remove lactic acid' being the typical responses.
- (ii)** Candidates typical responses were 'to remove lactic acid'; 'redirect blood to internal organs'; 'gradually reduce the body's temperature'. However, some stated the purpose of pulse lowering activities is to lower the pulse rate, a repeat of the question, with no explanation.
- Q22 (a) (i)** Most candidates identified muscular endurance and aerobic endurance as the components of physical fitness that must be included in the eight-week training programme. Only a small number did not select the appropriate components of physical fitness. The detail of some responses explaining why each component should be included was repetitive. For example, 'the person needs to work for a long period of time' was the explanation given for both components of fitness. This was a simplistic acceptable answer for muscular endurance, however an understanding by the candidate of the athlete requiring oxygen was expected for the need to include aerobic endurance.
- (ii)** Most candidates advised that the athlete includes swimming as the type of exercise. The more able candidates provided an appropriate explanation as to swimming being specific to the event.
- (iii)** Most candidates identified the correct training method for the training programme, with the most common answer being 'continuous steady pace training'. Some of these candidates however, did not explain why this would be most suitable.

- (iv)** Most candidates explained how the person could apply the principle of progressive overload to the eight-week training programme with the typical answers being 'increase frequency'; 'increase the time they swim for'; 'increase the distance the swim for'. However, not all these candidates gave an example of how this could be applied to demonstrate their understanding and therefore did not attain all four marks available. Some candidates simply stated that the person should 'increase the intensity', but this was not specific enough to be awarded a mark.
- (b)** Part (b) differentiated largely between the less and more able candidates. Candidates had to have a clear knowledge of planning an appropriate stage of a training programme for a specific component of fitness, as well as a clear understanding of the relationship between Repetition Maximum and repetitions. In general this question was answered poorly.
- (i)** There was a wide range of responses given. Some candidates had no understanding of appropriate Repetition Maximum therefore opted for 3RM; in the explanation in Part (ii) they described this as the lighter weight, which is incorrect. Other candidates thought because it was a weight programme it should develop muscular strength only and therefore selected 10RM. Differentiation was further obvious between candidates who did understand to develop muscular endurance that the RM should be between 13-25RM. Those that had a full understanding selected 25RM as most suitable for weeks 1-3 of the person's weights programme.
- (ii)** A mark was available for those candidates who understood that to develop muscular endurance the Repetition Maximum must be between 13 – 25RM. The more able candidates gave a full explanation which included that because this was the first phase of the training programme, 25RM would be most suitable as the weight to be lifted is much lighter than 16RM. Also, that it is better to start with this lighter weight and change to lower RMs, which will be heavier weights.
- (iii)** This was answered poorly by many candidates as they did not understand the relationship between Repetition Maximum and repetitions. Also, candidates were not able to attain a mark if they guessed 23 repetitions as it had to link to Part (i).
- (iv)** A mark was available for those candidates who understood that to develop muscular endurance the repetition must be between 13 and 25. The more able candidates were able to explain the relationship between Repetition Maximum and repetitions to decide between 23 repetitions and 15 repetitions being most appropriate. For example, with 25RM selected for weeks 1-3 of the programme the most suitable repetitions are 23 as 15 repetitions would be too low/easy for light weight of 25RM.

Component 2 Developing and Maintaining a Balanced Healthy Lifestyle

The specification clearly states that candidates are required to:

- know, understand and be able to explain what constitutes a balanced, healthy lifestyle with regard to exercise, nutrition, work, and rest and sleep;
- audit their own lifestyles from time to time (exercise, nutrition, work, rest and sleep, and unhealthy habits or actions);
- analyse, interpret and evaluate the data and information from the audits to determine and be able to explain their strengths and areas for improvement;
- decide and prioritise what they will do to further develop balanced, healthy lifestyles;
- monitor and evaluate the effectiveness of carrying out their actions and the effectiveness of the actions; and
- provide evidence to demonstrate developments towards achieving and maintaining a balanced, healthy lifestyle.

The majority of centres visited used a written booklet format as the main evidence for completing Component 2. It is encouraging that in 2018 teachers have guided their students using the support materials, 'do's and don'ts' advice given at the agreement trials and found on the CCEA Physical Education microsite.

In the best examples of candidates' work for Component 2, the candidates were very specific and detailed in recording what physical activity they actually did, whether on their own or in organised club or school team training sessions or competition situations (i.e. what, where, when, type of exercise/method of training, how hard and how long). The information given for these sessions was also usually broken down and categorised under the different components of physical fitness.

This detail in the audit allowed candidates to carry out quality analysis and evaluation of their physical activity profile in relation to the recommendations for good health. In addition, the fitness test results provided further opportunities for quality analysis and evaluation of their results with regard to health and to discovering areas for improvement in their physical activity profile. From their evaluations, the candidates identified areas of strength and areas for improvement and they set specific targets for improving their health, along with specific targets for improving their results in selected fitness tests.

The best candidates then, importantly, identified windows of time when they could do specific, additional physical activity, or they identified occasions where they could adjust what they were already doing in order to help achieve their specific targets. They produced realistic and detailed action plans that demonstrated how they would apply appropriate principles and methods of training over the eight weeks to achieve their specific targets. They also identified if they needed help or cooperation from others to implement their action plan, for example their parents, teacher or coach.

To monitor the implementation of the action plan, the top candidates kept a detailed record of what they actually did physically, over the weeks and tracked any changes (good and bad) that took place. At the end of each week, they accounted for the implementation of their action plan for that week. Half way through (four weeks), the candidates were retested in the fitness tests. They reported on the effectiveness of the implementation of their action plan and the effectiveness of the actions in their action plan in helping them to achieve the specific health targets they had set. They then adjusted their action plan as necessary for the final four weeks. The candidates continued to monitor and account for the implementation of the action plan for the remaining weeks. At the end of eight

weeks, the candidates completed the fitness tests again. Using the evidence from the fitness test results and from their monitoring and evaluating of the effectiveness of their implementation of the action plan and the effectiveness of the actions in their action plan, the candidates accounted for their degree of success in meeting the specific health and results targets they had set.

The completion of the revised Candidate Record Sheet is crucial in giving the moderator an overview of Component 2 however thorough annotation within the text highlighting positive and negative aspects of the work will result in a more successful confirmation of the teacher's mark.

In this examination series some teachers expressed the importance of this component in giving clarity and understanding to specification content and confirmed that they are continuing to use this model in its basic format to teach aspects of the new specification in 2019.

Principal Moderator's Report

Pre-Moderation

During the Summer 2018 the final moderation of the legacy specification was carried out. Communication with centres and use of the "Pre-moderation checklist" meant that most centres were well prepared and the moderation process ran smoothly. This year a few centres had not fully or correctly completed the OMR TAC1 form. Detailed guidance on the completion of all aspects of administration is given in the "Instructions to Teachers Booklet" (Available on the CCEA microsite).

Component 3 Individual Performance in Physical Activities

(a) Analysing, evaluating, planning, implementing and monitoring actions to improve skilled performance in selected physical activities.

The majority of centres had prepared their candidates well for this component. It is important to note that teachers who attended agreement trials demonstrated confidence and efficient organisation in facilitating this component. These teachers used the overview checklist provided at the agreement trials as follows;

Checklist of competencies to observe:

- 1 To be able to improve skilled performance in selected physical activities, the candidate:
 - Needs to know and understand the 'full marks' models for performing the skills (sound techniques).
 - Needs to be able to accurately observe performances of students and to analyse and evaluate effectively the performances against the 'full marks' models for the skills.
 - Needs to know, understand and be able to plan and implement drills and/or practice situations for the skills that will effectively aid learning for students who are in the cognitive and associative stages.

“Introduction phase” – does the candidate demonstrate knowledge and understanding of the full marks model of the skill to be introduced. Does he explain....

e.g. What is the skill?

What is its purpose?

When might it be used?

How is it performed?

(When assessing the candidate ask yourself for the specific physical activity or sport, how well did the candidate explain to the student the skill that was to be taught or improved and the benefits the student will have, if the skill is mastered?)

- 2** Does the candidate demonstrate the ‘Full marks model’ either by a personal demonstration, another student’s demonstration or using an iPad. Does he commentate or summarise knowledgably on the performance.

(When assessing the candidate ask yourself how clearly did the candidate explain/ demonstrate to the student the ‘full marks’ model of how the skill should be performed?)

- 3** Does the candidate explain clearly what he requires the student to do (this may be whole or part- whole drills)?

Where another student is used to assist is that student given clear instructions and does the candidate ensure that his role doesn’t inhibit the improvement of the skill e.g. if he is feeding a ball that he can do so accurately.

(When assessing the candidate ask yourself did the candidate give the student sufficient time to go through and assimilate the ‘full marks’ model (step by step, if appropriate)? This will involve the student trying the ‘full marks’ model with visual and verbal feedback and corrections in technique being given by the candidate. Physical manipulation, if needed, could also be used.)

- 4** Are the methods used appropriate, safe and effective when applying the process to improve skilled performance?

(When assessing the candidate ask yourself how clearly were the initial practices explained/demonstrated? Did the candidate continually observe the student performing the skill and allow the student sufficient practice time, using the drill?

- 5** Does the candidate allow an appropriate amount of practice time where he observes the skill without commentary?

- 6** After a period of observation does the candidate begin to “spot and fix” the student’s performance? Does he give “take up “ time? Does he analyse critically the performance, identifying strengths as well as weaknesses? (Commentary must be informative. The candidate should refrain from “empty” comments such as ‘that was good’. Better to say “that was good because.....”)

(When assessing the candidate ask yourself how well did the candidate analyse and evaluate the observed performances of the student against the ‘full marks’ model and how well did the candidate provide the student with accurate, effective, corrective feedback? (spot and fix)

- 7** Does the candidate recognise when the student is ready to progress the skill? If the student is having difficulty with the task does the candidate adjust the task effectively?

(When assessing the candidate ask yourself how clearly were the subsequent progressive or regressive practices explained/demonstrated?)

- 8** Does the candidate provide a summary of how well his action plan worked to improve skilled performance? (He should explain observed evidence of strengths and areas for improvement)

Best practice shows that candidates perform better when they work with one pupil from Key Stage 3. As in previous examination series, problems can arise because of a poor choice of skill or because candidates are given a group session to coach. The challenge remains for teachers to get the balance right between who is to perform the skill, the complexity of the skill to be performed and the appropriateness of the drills for the level of the performer. In some cases candidates were using pupils who were too capable and, as a result, spotting and fixing of errors was almost impossible. Best practice is a basic skill demonstrated to a complete beginner or an advanced skill demonstrated to a fairly experienced improver.

- (b)** Improving the quality, efficiency and effectiveness of individual performances in physical activities.

This component was delivered confidently in the majority of centres. Some centres chose common activities for a whole teaching group while others allowed individual candidates to make their own choices. Both methods are acceptable provided the activities are chosen from at least two categories.

Fitness continues to be a popular activity. The importance of following strictly to protocol cannot be overemphasized. It is essential that students have a thorough knowledge of these protocols and can demonstrate how tests are set up.

All updated information on Fitness can be found in the support materials on the CCEA microsite for Physical Education.

Team games continue to feature prominently at moderation visits. It is important that a second member of staff is available to referee/umpire games allowing the moderating teacher to focus on observation. It is also helpful, prior to the game, to observe candidates in appropriate drills that demonstrate the skills of the sport. Clear identification of candidates is crucial.

Centres are to be commended for supplying supplementary evidence in the form of video recordings, competition results, activity logs, testimonials and certificates of achievement of candidates who participate in non-centre activities. Many centres have used sports governing bodies to deliver activities such as Orienteering and Volleyball. Please note that, while these activities have proved very successful, it is essential that the class teacher oversees and takes responsibility for the assessment of the candidate in conjunction with the qualified coach. Teachers assessing Component 3 (b) should note that candidates' standard of performance is not the only element assessed. Candidates must also demonstrate strategic and tactical play, an appropriate range of skills, appropriate levels of fitness, knowledge of rules and conventions and suitable attitudes and behaviours associated with fair play and success.

- (b)** Improving the quality, efficiency and effectiveness of individual performances as leaders and officials.

Candidates in Component 3b may also be assessed as leader/official. More students in 2018 took the opportunity to be assessed in their strongest sports as both performer and leader/official.

The learning outcomes are evidenced at moderation through observation of the candidates in a practical situation e.g. leading a warm up, facilitating appropriate skill drills and umpiring a game. Candidates achieving top range marks were also able to recount evidence of organizing minor tournaments e.g. with primary schools or inter-house competitions. It is important to use the assessment criteria specific to this leader/official component on page 52 of the specification.

Contact details

The following information provides contact details for key staff members:

- **Specification Support Officer: Arlene Ashfield**
(telephone: (028) 9026 1200, extension: 2291, email: aashfield@ccea.org.uk)
- **Officer with Subject Responsibility: Peter Davidson**
(telephone: (028) 9026 1200, extension: 2993, email: pdavidson@ccea.org.uk)