

GCSE (9-1)

Exemplar Candidate Work

PHYSICAL EDUCATION

J587

For first teaching in 2016

J587/01/02 Summer 2019 examination series

Version 1

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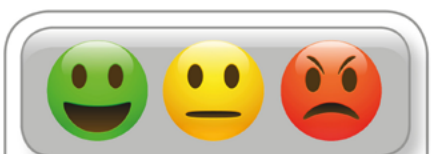
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Introduction

These exemplar answers have been chosen from the summer 2019 examination series.

OCR is open to a wide variety of approaches and all answers are considered on their merits. These exemplars, therefore, should not be seen as the only way to answer questions but they do illustrate how the mark scheme has been applied.

Please always refer to the specification <https://www.ocr.org.uk/Images/234822-specification-accredited-gcse-physical-education-j587.pdf> for full details of the assessment for this qualification. These exemplar answers should also be read in conjunction with the sample assessment materials and the June 2019 Examiners' report or Report to Centres available from Interchange.

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Component 01

Question 21b

(b)* Specificity is one principle of training that would allow a gymnast to focus on relevant exercises suited to their routine.

Using practical examples, explain the use of other principles of training in a gymnastic training programme.

Evaluate reasons why some gymnasts may use beta blockers within their training programme.

[6]

Exemplar 1

6 marks

Progressive means the training must get gradually harder in order to force the body to adapt and improve. This would mean the gymnast would gradually increase the lengths of training sessions or make them harder. Overload is where the body needs to be pushed beyond what it can comfortably do in order to stress it to adapt. Consequently the gymnast may want to make the training harder and a higher intensity eg holding the balances for longer to improve muscle endurance. Reversibility means they must keep training or fitness gains will be lost. The gymnast should train around 3 times a week every week to avoid losing fitness ~~gains~~ gains. Gymnasts may use beta blockers as beta blockers help calm them down and prevent adrenaline rushes. This will prevent the gymnast ~~shaking~~ shaking or feeling stressed which could otherwise impact their performance. If they were shaking during a balance it would be harder to hold when

training. It may also ~~to~~ calm them down which would help them focus on their routine and improve performance. However, it can lower the heart rate and blood pressure [6] which could be dangerous for the gymnast.

Beta blockers help fine motor skills, however they are not as ~~use~~ useful for gross motor skills, so they may not help gymnasts if they are performing a ground routine with lots of flips and movements that involve many different parts of the body.

Examiner commentary

This response shows detailed knowledge and understanding of the principles of training. Each principle is clearly explained and a suitable application of each principle to support a gymnast's training programme has been given. It is important for candidates to show that reversibility must be avoided, and this is demonstrated in this response. Several reasons for the use of beta blockers have been evaluated. Throughout the response there are clear and consistent practical applications of knowledge to gymnastic performance and to a gymnast's training programme.

Exemplar 2

5 marks

~~P~~ P stands for Progression, this is ~~the~~ when you gradually make the training harder (by increasing intensity, duration etc.) in order to improve fitness. The gymnast would do this to make sure they are improving. O stands for Overload, this means pushing your body during training so that your body has to adapt to this harder work and thus improves the skill/fitness. ~~The~~ The gymnast would use this to make sure their body is working as hard as it can in order to improve fitness. The R stands for reversibility, this is the process in which you can lose fitness by not training (due to illness, pregnancy etc.). The

gymnast would use this principle by ~~the~~ training regularly so that they don't lose fitness. The V stands for variety, ~~the gym~~ this means making sure there are a variety of exercises and training methods. The gymnast would use this to make sure they not only target different muscle groups (in so that they don't overwork them) but also stay motivated as they aren't doing the same thing over and over again. Beta blockers reduce your heart rate and blood pressure, they also give you a steady hand and reduce anxiety. The gymnast may use them because [6] they get very nervous and anxious before a competition or so that they don't shake while performing. The gymnast may take beta blockers because she wants to enhance her training as she feels a lot of pressure from herself and others to do well. The gymnast may want to win at all costs. The gymnast may also take them because they believe that the other competitors are taking them and don't want to be at a disadvantage.

Examiner commentary

This response shows a very good knowledge and understanding of the principles of training. There is also a detailed range of reasons for the use of beta blockers. These reasons include physiological and psychological benefits, together with other arguments for their use, such as having a win-at-all-costs attitude and believing that others are also using them.

This response could be improved by applying the principles of training to a gymnast's training programme. For example, overload could be applied by training for longer periods of time, or at a higher intensity by lifting heavier weights in the gym. Progression could be applied by showing a gradual increase in the weights that are lifted, i.e. a 10% increase in weight.

Exemplar 3

4 marks

The other principles of training a gymnast may use are progression, overload and Reversibility. Progression is the gymnast training becoming progressively harder. For example on day one of the training program she will be able to do one cartwheel, then the next she will be able to do two in a row. This is important as it means improvements will occur and training will not reach a plateau (point when improvement stops). Overload may also be a principle of training, this means increasing the intensity of the ~~gymnastic~~ exercise. For example training will be at ^{60-80%} of their max heart rate ($220 - \text{Age}$) to allow enough pressure to be put on the gymnast. An example would mean ~~is~~ doing a run at 60-80% to ensure pressure ^{+ strains are} put upon them. The gymnast would also want to be mindful of reversibility - to ensure it does not occur. Reversibility is [6] the effects of exercise being reverted back to its original state. The gymnast would ~~is~~ aim to ~~avoid~~ ^{prevent}

this from happening the gymnast would ensure demands are met.

A gymnast may decide to take the performance enhancing drug;

Beta Blockers. These ~~can~~ slow down the body's Heart Rate, a gymnast may want this to calm their nerves. Beta Blockers also may be useful when taking part in precision activities such as beam.

Using performance enhancing drugs may help to optimise the gymnast's performance ^{during training}, therefore increasing the chance of future success.

Examiner commentary

This response shows satisfactory knowledge and understanding of two principles of training. Overload is explained well using a practical example that is applied to the gymnast's training routine. Progression is described, but the example is not a suitable way of explaining progression in training. The point about avoiding reaching a plateau is a good one. Reversibility is not explained but there is some understanding of the principle. There is satisfactory knowledge of two benefits of beta blockers and these benefits are applied to the enhancement of gymnastic performance on the beam.

The answer could be improved by applying the principles of progression and reversibility to the gymnast's training programme. Furthermore, other benefits of beta blockers could have been evaluated, such as the pressure from a coach to win or a belief that they will not get caught.

Exemplar 4

3 marks

A gymnast may also use progression in their training programs. For example they could add ~~different~~ ^{another} stages into their routine.

A gymnast could also use overload in their training programme. For example they could ~~add~~ ^{make} their routine go on for longer.

A gymnast could also ~~use~~ suffer from reversibility in their training programme. For example, they could miss their training programme for a few weeks resulting in the gymnast having to start it again.

One reason a gymnast would use beta blockers is to keep them focused. For example, their heart rate won't be as high meaning they are fully concentrated. This means it will be easier for the gymnast to complete their routine without mistakes. [6]

Examiner commentary

This response shows a basic (Level 1) knowledge and understanding of principles of training. The explanations of overload of progression are too vague. An example is given which shows some understanding of overload. There is some evidence that the principle of reversibility is understood, but not the idea of avoiding its effects. The evaluation of beta blockers is satisfactory (Level 2). Two reasons for their use are given and the answer shows how these benefits of beta blockers will help to optimise the gymnast's performance in competition.

This response could be improved by explaining the meaning of each principle and then applying them specifically to a gymnast's training programme to improve the performer's fitness.

Exemplar 5

2 marks

Gymnasts may use beta blockers within their training programme to reduce levels of anxiety. This will also decrease their heart rate so will help them remain calm.

Specificity will allow a gymnast to focus on relevant exercises because it could be a move, such as a front walkover, which she wants to put in her routine. For example, she could start off doing handstands until she feels comfortable enough to go over into a front walkover. Furthermore

overload will help a gymnast focus on relevant exercises as ~~in~~ the gymnast will only be working on moves which are relevant to her routine so won't overload. They will also be practising regularly so therefore won't be effected by reversibility.

Examiner commentary

This is a Level 1 response. Two reasons for the use of beta blockers are given. Specificity is explained but no credit is given for this as it was not a requirement of the question. The candidate has not shown an understanding of the principle of overload, and progression has not been attempted. The response shows a basic understanding that reversibility should be avoided by practising regularly. This lifts the answer up from the bottom of Level 1. It does not sit well in the discriminators in the mark scheme because knowledge of beta blockers is better than principles of training.

The response could be improved by showing an understanding of each principle, applying that knowledge to a training programme suitable for a gymnast, and evaluating in greater depth the benefits of beta blockers to enhance performance in gymnastics.

Exemplar 6

1 mark

The ~~gymnast~~^{gymnast} must also measure
 their skill they are performing, meaning
 is it ~~extremely hard~~ and how far
 they ~~need~~^{need} to complete this skill. ALSO
 they ~~on the gymnast~~^{gymnast} need to make sure
 it is achievable. For example they
 should ~~not~~^{not} set extreme task that they know
 they won't be able to complete in
 the time period. Next one is recorded,
 the athlete must make sure they are
 keeping a log or diary of what day
 they train on the routine for how long,
 how many times and any feedback.
 Last one is time, set a goal of
 how long they have ~~left~~ to complete
 the skill. For example a ~~boy~~^{boy} month
 week, month, year. Beta blockers is a
 steroid that ~~helps~~^{helps} ~~improves~~^{improves} ~~performance~~^{performance}
 keeping your heart rate not slower.
 This means the gymnast ~~won't~~ will
 not tire as quickly. [6]

Examiner commentary

This response has described the SMART principle and does not get any credit for this knowledge as the question does not ask for it. It is irrelevant. No knowledge of the principles of training has been shown, nor has any knowledge of training been applied to a training programme that would benefit a gymnast. One valid point has been made that beta blockers keep heart rate slower, which means the response is at the bottom of Level 1.

Component 02

Question 23c

(c)* Regular exercise and a balanced diet often results in physical and emotional benefits.

Using practical examples, describe the emotional benefits of participating in physical activity.

Explain how regular exercise and a balanced diet result in long-term benefits on the heart.

..... [6]

Exemplar 1

6 marks

- ① Using practical examples, describe the emotional benefits of participating in physical activity.
 Confidence → Body → Stress → Endorphines
 ② Explain how regular exercise and a balanced diet result in long-term benefits on the heart.
 → less chance of CHD Remove → hypertrophy, SV, & HR ↓

Participating in physical activity can emotionally benefit performers as when exercising hormones called endorphins are released, which elevate mood. An example of this is the performer's happiness being increased after completing a run. Another emotional benefit includes stress relief from things such as work and school commitments. For example, a contact sport such as rugby may help the performer to relieve stress during a match. Confidence and ^{positive} body image may also be increased through participating in physical activity as due to weight loss and the physical benefits of participating. An example of this is performers having increased confidence through achievements in sport such as a new personal best when throwing a shot put. An example of ^{positive} body image being increased could be achieved

through weight loss from a spinning class at the gym. ★ See Additional space →

Regular exercise can lead to long term adaptations and benefits in the heart such as cardiac hypertrophy. Cardiac hypertrophy means the heart muscle increases in size so the strength of muscular contraction increases.

Due to muscular hypertrophy the stroke volume of the heart increases as more blood is ejected from the heart per beat. As the stroke volume and muscle size, in the heart, increases the resting heart rate of the athlete will decrease. This will benefit the heart as the cardiac output is increased during exercise and less stress will be placed on the heart.

A balanced diet also benefits the heart as it decreases the risk of high blood pressure and coronary heart disease. This is as less fat will build up within the blood vessels in the heart creating resistance to flow.

Examiner commentary

This exemplar shows an answer from a candidate who has performed well overall in the rest of the paper.

The candidate scored 6 marks out of a possible 6 marks and was judged to be in Level 3 of the mark scheme.

The candidate has identified that there are two parts to the question by using their own annotation. They have also identified that 'practical examples must be used for the first part which is related to emotional health. This is good practice.

Four practical examples have been given for emotional benefits including 'running', 'spinning', 'athletics' and 'rugby'.

The candidate shows good knowledge and understanding (AO1) of emotional benefits of participation but does not develop this understanding.

In the second part of the answer the candidate has provided numerous AO1 responses which are then developed well (AO3). This section covers links between participation and diet, and participation and long-term effects on the heart.

The response is well written, with good spelling, use of technical terms and punctuation.

Exemplar 2

5 marks

Firstly ~~if~~ if you play sport or do regular exercise it can ~~it~~ lower self esteem and make you more confident. For example if you go to the gym and lift the heaviest weight you may feel proud of yourself. Also it helps you manage stress and anxiety as you get used to adrenaline. For example if you play boxing you get used to nerves as you do it constantly so you can deal with it in life. Also you are less likely to feel depression as a chemical called serotonin is released so it reduces depression. Also For example playing golf may make you more relaxed so you are less depressed. Also you are more social for example if you play rugby you have the sense of belonging to a team so you are less anti social as you speak to more people. Also when playing sport endorphins are released for example swimming which could make you happy. Regular exercise can help your heart as HDL is released which removes bad cholesterol [6]

1) So you have a less chance of gaining CHD. Also you are less likely to get overweight if you have a

balanced diet so you also reduce the risk of diabetes helping your heart.

Examiner commentary

This exemplar shows an answer from a candidate who has performed very well throughout the paper.

The candidate scored 5 marks out of a possible 6 marks and was judged to be in Level 3 (the top level) of the mark scheme.

The candidate has provided a wide range of valid points which cover AO1 in both sections of the question. Emotional benefits descriptions are developed well. Practical examples given for emotional benefits are appropriate and come from a number of different sports e.g. lifting weights at a gym, boxing, playing golf, playing rugby and swimming. This places the answer in Level 3.

AO3 areas are covered well by development of numerous, (AO1), statements across both parts of the answer. Spelling is generally good and the candidate has made good use of technical terms.

In order to gain full marks, the candidate needs to provide more links between participation and long term effects on the heart, for example through regular exercise hypertrophy of the heart takes place (AO1) which results in increased stroke volume (AO3) and a decrease in resting pulse rate (AO3).

Exemplar 3

4 marks

When you exercise you release endorphines, ~~wh~~ which make you feel happier and healthier. An emotional benefit of exercise is that exercise decreases your stress levels as you are able to focus your mind and calm yourself. Also, when exercise you will have improved confidence levels as you will perceive yourself as having a better body image, as you will feel healthier. Another emotional benefit is that you will have a better body image and you will feel more proud of yourself after completing exercises. For example, a dancer that has a lot of stress due to poor confidence and body image can become more confident after exercising.

A balanced diet ~~is~~ is matching energy input with energy output. Both a balanced diet and regular

exercise can improve result in long-term benefits of the heart as it will decrease the risk of developing CHD, ~~will~~ as your heart will be healthier. Also, regular exercise will also cause hypertrophy of the heart to occur, as it will become much stronger and bigger if you eat a balanced diet and exercise regularly. [6]

Examiner commentary

This exemplar shows an answer from a candidate who performed well throughout the paper.

The candidate scored 4 marks out of a possible 6 marks and was judged to be in Level 2 of the mark scheme.

The candidate has shown good knowledge and understanding throughout the question, covering more than enough AO1 content. They only provide one example (AO2) when writing about 'a dancer having a lot of stress'.

As this is the only effective practical example and an attempt at an AO3 point has been made ('you feel proud of yourself after completing exercises'), with success this places this answer firmly at the top of Level 2 gaining 4 marks.

The answer is well written, with good spelling and use of some technical terms, therefore, to achieve 5 or 6 marks the candidate would need to provide 1 or 2 more practical examples (AO2) and develop some of their AO1 points. For example, they could develop their knowledge regarding hypertrophy of the heart by stating that this would result in a decrease in resting heart rate, or increase stroke volume/cardiac output. They could also develop their example of the dancer by stating that the dancer might exercise with others which not only makes them happy but would also decrease the feeling of loneliness (AO3).

Exemplar 4

3 marks

After regular exercise you gain a better image of yourself which then boosts self-esteem e.g. if you go to the gym and lift weights, you'll gain muscle, making you look better. It'll also mean you gain confidence.

Exercise that consists of cardiovascular work will mean ~~a~~ the hypertrophy of the heart along with a decreased resting heart rate and blood pressure. Cardiac output will also increase.

Examiner commentary

This exemplar shows an answer from a candidate who has generally scored well in the rest of the paper.

The candidate scored 3 marks out of a possible 6 marks and was judged to be in Level 2 of the mark scheme. The candidate immediately identifies the relationship between having a good self image (AO1) and increasing self esteem (AO1). They then link this to an appropriate practical example, going to a gym and lifting weights which results in increase muscle (AO2). The candidate then identifies that cardiovascular work will result in hypertrophy of the heart (AO1). They then develop this by stating that this results in a decreased resting pulse rate (AO2) and increased cardiac output (AO2).

To improve this answer, the candidate should provide more emotional benefits with examples and explain how a balanced diet could result in long-term benefits on the heart. For example, they could state that going to the gym and lifting a challenging weight might make them feel good about themselves (AO1), this might then give them a high opinion of themselves (AO3). Lifting weights also releases endorphins (AO1) which makes them feel happy when working with others (AO3). Having a balanced diet with the recommended amounts of protein will help build and repair cells in muscles and help maintain a healthy heart (AO3).

Exemplar 5

2 marks

If you joined a football club you would be doing a lot of aerobic exercise this would help you cardiovascular system, ~~so~~ also joining the club you would make new friends and doing this will increase your confidence around people, also participating in a sport will make you have a healthy lifestyle your body will be burning fat so you will be more confident with your body.

Examiner commentary

This exemplar shows an answer from a candidate who has scored well on previous questions, but their answer is not specific enough when explaining benefits to the heart. They also lack development of some of the points they make regarding emotional benefits of participation.

The candidate scored 2 marks out of a possible 6 marks and was judged to be in Level 1 of the mark scheme. They have given their response using a practical example (AO2) which is asked for in the question. They provide knowledge and understanding (AO1) by identifying that playing football involves a lot of aerobic exercise which helps the cardiovascular system. This does not relate to a specific benefit on the heart itself but is a relevant example. They then link joining the football club to 'making new friends' (AO3) which results in an increase confidence around people (AO1). The candidate has also linked being participating in sport and burning fat which results in achieving a better self-image (AO1).

To improve their answer the candidate needs to explain how regular exercise has benefits on the heart itself and state what the benefits would be for example hypertrophy of the heart (AO1) along with stronger heart muscle contractions (AO1) resulting in increased cardiac output (AO2). They could also develop their point regarding being 'more confident with your body' by identifying that burning fat results in weight loss. This can make the person feel that they possess an image that others admire.

Exemplar 6

1 mark

Participating in physical activity can help people to meet new people and make new friends. This can then help them to boost their confidence. Also, if they perform well and teammates or others say well done this can help participants to feel better about themselves. A balanced diet is eating a variety of different foods. This has long term effects on the heart such as an increase in ~~the~~ heart mass* and an increase in blood flow.
* and heart muscle

Examiner commentary

The candidate has shown knowledge and understanding by stating that 'by meeting new people and making new friends' there is an emotional benefit, a 'boost in confidence'.

They also show their knowledge and understanding through 'if they perform well and teammates or others say well done this can help performers to feel better about themselves'. Neither point has been developed, so neither gains credit for AO3.

The candidate has attempted to provide an explanation of how 'regular exercise and a balanced diet result in long-term benefits on the heart'. However, this is limited to how a balanced diet alone has long term effects on increase in heart (muscle) mass and blood flow, which is inaccurate. There is no mention of how regular exercise benefits the heart.

The candidate has not provided any practical examples (AO2) to illustrate their knowledge and understanding, which the question asks for, therefore their response is a Level 1 answer.

Overall, the candidate has provided two points that demonstrate their knowledge and understanding (AO1) both relating to emotional benefits, with no AO2 or AO3 content.

To improve this answer the candidate needs to develop their points e.g. 'Also, if they perform well, for example scoring a century in a cricket match would make them feel good and give them a higher level of self-efficacy because of the achievement'. They also need to state that the effects on the heart they have given examples for are a result of regular exercise and how a balanced diet affects the heart, for example vitamins can protect against heart disease.

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