



Rewarding Learning

ADVANCED
General Certificate of Education
2019

**Sports Science and the
Active Leisure Industry**

Unit A2 2

The Application of Science
to Sports Performance

[AAL21]

WEDNESDAY 5 JUNE, AFTERNOON

**MARK
SCHEME**

General Marking Instructions

Introduction

Mark schemes are intended to ensure that the GCE examinations are marked consistently and fairly. The mark schemes provide markers with an indication of the nature and range of candidates' responses likely to be worthy of credit. They also set out the criteria which they should apply in allocating marks to candidates' responses.

Assessment objectives

Below are the assessment objectives for GCE Sports Science and the Active Leisure Industry.

Candidates must:

- demonstrate knowledge and understanding of sports science and the active leisure industry (AO1);
- apply knowledge, understanding and skills through different contexts appropriate to the sports science and the active leisure industry (AO2); and
- analyse and evaluate evidence to make reasoned and valid judgements about sports science and the active leisure industry (AO3).

Quality of candidates' responses

In marking the examination papers, examiners should be looking for a quality of response reflecting the level of maturity which may reasonably be expected of a 17-year-old or 18-year-old which is the age at which the majority of candidates sit their GCE examinations.

Flexibility in marking

Mark schemes are not intended to be totally prescriptive. No mark scheme can cover all the responses which candidates may produce. In the event of unanticipated answers, examiners are expected to use their professional judgement to assess the validity of answers. If an answer is particularly problematic, then examiners should seek the guidance of the Supervising Examiner.

Positive marking

Examiners are encouraged to be positive in their marking, giving appropriate credit for what candidates know, understand and can do rather than penalising candidates for errors or omissions. Examiners should make use of the whole of the available mark range for any particular question and be prepared to award full marks for a response which is as good as might reasonably be expected of a 17-year-old or 18-year-old GCE candidate.

Awarding zero marks

Marks should only be awarded for valid responses and no marks should be awarded for an answer which is completely incorrect or inappropriate.

Types of mark schemes

Mark schemes for tasks or questions which require candidates to respond in extended written form are marked on the basis of levels of response which take account of the quality of written communication.

Other questions which require only short answers are marked on a point for point basis with marks awarded for each valid piece of information provided.

Levels of response

Tasks and questions requiring candidates to respond in extended writing are marked in terms of levels of response. In deciding which level of response to award, examiners should look for 'best fit' bearing in mind that weakness in one area may be compensated by strength in another. In deciding which mark within a particular level to award to any response, examiners are expected to use their professional judgement.

Quality of written communication

Quality of written communication is taken into account in assessing candidates' responses to all tasks and questions that require them to respond in extended written form. These tasks and questions are marked on the basis of levels of response. The description for each level of response includes reference to the quality of written communication.

For conciseness, quality of written communication is distinguished within levels of response. An example follows:

Level 1: Quality of written communication is basic.

Level 2: Quality of written communication is good.

Level 3: Quality of written communication is excellent.

In interpreting these level descriptions, an example is provided below. Examiners should refer to the specific guidance given within the mark scheme for each question:

Band 1 (Basic): The candidate makes only a limited selection and use of an appropriate form and style of writing. The organisation of material will lack clarity and coherence. There is little use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar may be such that intended meaning is not clear.

Band 2 (Good): The candidate makes a reasonable selection and use of an appropriate form and style of writing. Relevant material is organised with clarity and coherence. There is some use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar are sufficiently competent to make meaning clear.

Band 3 (Excellent): The candidate successfully selects and uses the most appropriate form and style of writing. Relevant material is organised with a high degree of clarity and coherence. There is widespread and accurate use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar are of a sufficiently high standard to make meaning clear.

- 1 (a) Some examples of suitable points to be explained by the candidate.
- Cardiac hypertrophy means that the heart muscle becomes larger and stronger. This means that the heart pumps a larger volume of blood out per beat, hence the stroke volume is greater.
 - This enlargement is caused by both an increase in thickness of the cardiac muscle in the ventricular wall and an increase in the size of the ventricular chamber.
 - Long-term adaptations enable the cardiovascular system to function more efficiently with less stress to the body.
 - Adaptations include increased thickness of ventricular myocardium, increased strength of ventricular contractions.
 - Cardiac hypertrophy can lead to a greater stroke volume and a reduced resting heart rate (bradycardia).
 - Increased maximum cardiac output (although cardiac output at rest and sub-maximal levels remain unchanged).
 - Increased ejection fraction will increase from 60 per cent up to 85 per cent.
 - Increased capillarization of the heart muscle, which facilitates the diffusion of oxygen into the myocardium.
 - RBC

Award [1] mark for key phrase and up to [3] marks for the full description.
All other valid points will be given credit.
(AO1, AO2) [4]

- (b) Some examples of suitable points to be identified by the candidate:
- Joint – hinge or synovial hinge joint
 - Movement type – Flexion
 - Agonist muscle – biceps
 - Antagonist muscle – triceps

Award [1] mark for key phrase, [2] marks for a basic identification and up to [4] marks for a full identification.
All other valid points will be given credit.
(AO1) [4]

- (c) (i) • **Concentric** movement in the **upward phase**, when the **biceps shortens** under tension producing movement around the elbow joint.
The force exerted is greater than the resistance. [2]
- (ii) • **Eccentric movement** in the **downward phase**, when the **biceps lengthen** under tension helping to control movement around the elbow joint. The force exerted is less than the resistance. [2]

Award up to [2] marks for each muscle contraction identified and up to [2] marks for a full identification.
All other valid points will be given credit.
(2 x [2])
AO1

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- 2 (a) (i)**
- Increase in stroke volume.
 - Increased heart rate.
 - Increased cardiac output.
 - Redistribution of blood flow to the working muscles.
- Award up to [1] mark for key phrase and up to [2] marks for a full identification of the responses.
All other valid points will be given credit.
(1 x [3])
(AO1) [3]
- (ii)** Some examples of suitable points to be described by the candidate:
- Increased stores of ATP and PC stores within the muscle cell sarcoplasm.
 - Greater levels of enzymes present, improves energy produced.
 - Increased rate of glycolysis resulting in extended energy production via the alactic energy pathway and delayed OBLA.
 - Reduced tendency to experience DOMS.
 - Greater tolerance to lactic acid through buffering, can delay fatigue.
 - Increased strength of skeletal muscle/connective tissue, increase joint stability.
 - Increased stroke volume and Q.
 - Increased muscle mass.
 - Type IIa fibres adopt type IIb characteristics, increased speed/more force.
 - Increases the potential duration of high intensity exercise for up to 1–2 seconds.
 - OBLA
 - 4 physiological benefits developed
- Award up to [1] mark for key phrase and up to [4] marks for a full description.
All other valid points will be given credit.
(1 x [4])
(AO2) [4]
- (b)**
- (i)** Some examples of suitable points examined by the candidate:
Slow twitch fibres/type 1/slow oxidative fibre
- Red in colour, small in diameter.
 - Good at working with oxygen.
 - Bigger and a higher number of mitochondria.
 - Increased level of myoglobin.
 - Significant capillary action/increased capillary density.
 - Slowest nerve transmission.
 - Increased levels of triglyceride.
 - Increased levels of oxidative enzymes.
 - Aerobic in nature.
 - Resistant to fatigue.
 - Support sub-maximal contractions, e.g. endurance based athletes, runners, cyclist, long distance swimmers.
 - Type IIa take on type I characteristics [3]
- (ii)** Type IIb/FTG
- White in colour.
 - Poor at working with O₂/good at working without O₂.
 - Large diameter.
 - Low levels of capillaries.
 - Low levels of myoglobin.

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- Low levels of mitochondria.
- Higher levels of PC/muscle glycogen.
- Fastest nerve transmission.
- Recruited last.
- Alactic in nature.
- Fatigues quickly.
- Can generate maximal power, e.g. 100 m sprinter.

Award [1] mark for key phrase, and up to [3] marks for a full explanation.
All other valid points will be given credit.

(2 x [3])
(AO2)

[3]

(c) The quality of written communication is assessed in this question.

Indicative content

- By training regularly, the novice runner will experience a number of anatomical and physiological adaptations that will enable the body to function more effectively at these intensities.
- The consequences of the training will be that the body will be able to generate the same output for a lower work rate or, alternatively, a greater output for the same work rate.
- Main impact is cardiac hypertrophy, stronger heart, increases contractile force.
- Decreased resting heart rate/bradycardia. Increased strength helps pump more blood into the aorta and arteries.
- Increased stroke volume, increased volume of blood ejected from the left ventricle per beat, more nutrients supplied to working muscles.
- Increased capillarisation as the number of capillaries surrounding the cardiac muscle increases leading to an increase in the rate of gaseous exchange, increasing levels of oxygen and nutrients being delivered to the working muscles and carbon dioxide to the lungs.
- Increased maximum cardiac output when training (Q) as the volume of blood ejected from left ventricle per minute increases.
- Increased ejection fraction, the percentage of blood actually pumped out of the left ventricle per contraction. During exercise this increases to accommodate the increased need for oxygenated blood to be delivered to the working muscles and the need for re-oxygenated blood.
- Increased venous return, this is the volume of blood that returns from the body to the right side of the heart. During training the venous return significantly increases due to the mechanism termed the muscle pump, where skeletal muscles squeeze blood back towards the heart.

All other valid points will be given credit.

Level 1 ([1]–[3])

Overall impression: Basic

- Basic knowledge and understanding of the short-term and long-term impact on the heart of a novice runner after completing a training programme for a 10 km race. The candidate may provide basic examples.
- Demonstrates a basic ability to examine the short-term and long-term impact on the heart of a novice runner after completing a training programme for a 10 km race. The candidate may provide limited relevant examples related to the short-term and long-term impact of the heart of a novice runner after completing a training programme.
- Quality of written communication is basic. The candidate makes a limited selection and use of an appropriate form and style of writing. The organisation of material may lack clarity and coherence. There is little

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use of specialist vocabulary. Presentation, spelling, punctuation and grammar may be such that intended meaning is not clear.

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Level 2 ([4]–[6])

Overall impression: Good

- Good knowledge and understanding of the short-term and long-term impact on the heart of a novice runner after completing a training programme for a 10 km race. The candidate may provide some discussion with some explanation given.
- Demonstrates a good ability to examine the short-term and long-term impact on the heart of a novice runner after completing a training programme for a 10 km race. The candidate will provide some relevant examples related to the short-term and long-term impact on the heart of a novice runner.
- Quality of written communication is good. The candidate makes a reasonable selection and use of an appropriate form and style of writing. Relevant material is organised with some clarity and coherence. There is appropriate use of specialist vocabulary. Presentation, spelling, punctuation and grammar are sufficiently competent to make meaning evident.

Level 3 ([7]–[8])

Overall impression: Excellent

- Excellent knowledge and understanding of the short-term and long-term impact on the heart of a novice runner after completing a training programme for a 10 km race. The candidate will provide fully developed explanations of the short-term and long-term impact on the heart of a novice runner after completing a training programme for a 10 km race.
- Demonstrates an excellent ability to examine the short-term and long-term impact on the heart of a novice runner after completing a training programme for a 10 km race. The candidate will provide detailed examples related to an excellent level and elaborate with thorough explanation.
- Quality of written communication is excellent. The candidate successfully selects and uses an appropriate form and style of writing. Relevant material is organised with a high degree of clarity and coherence. There is an extensive and accurate use of specialist vocabulary. Presentation, spelling, punctuation and grammar are of a high standard and ensure that the meaning is clear.

[0] is awarded for a response not worthy of credit
(AO3)

[8]

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- 3 (a) Some examples of suitable responses included by the candidate:
- Modern technological products have revolutionised sport which can aid improvement in relation to increased comfort and increased safety.
 - Technological advances in clothing means that athletes can, for example, remain cool, warm, well ventilated, depending on their requirements.
 - Technological development has improved the facilities athletes now have access to.

Award [1] mark for key phrase and up to [2] marks for the identification of the advances in technology.

All other valid points will be given credit.

(3 x [1])

(AO1)

[3]

- (b) Some examples of suitable points to be explained by the candidate:
- Used to aid faster recovery time so that athlete can continue training.
 - Enabling the athlete to train more frequently and can help muscle tissue to repair quickly.
 - Sprint athletes use steroids to increase muscle strength, power and bulk.
 - Narcotic analgesics could be used for the management of pain, to reduce pain and mask injury.
 - Anabolic steroids are artificially produced male hormones which help to repair the body after periods of stress.

Award [1] mark for key phrase and up to [3] marks for full explanation

All other valid points will be given credit.

(4 x [1])

(AO2)

[4]

- (c) **The quality of written communication is assessed in this question.**

Indicative content:

- Some drugs are against the law and others against sporting regulations, but many elite athletes can be attracted because it is presumed most top performers are taking them.
- Sports performers take drugs or use other ergogenic aids to attempt to gain an advantage over other competitors or players.
- For many athletes, taking drugs ceases to be only a personal decision. This is part of the win ethic, the willingness to win at all costs, or simply the desire to excel in something as an unbridled ambition.
- Many athletes take performance-enhancing drugs to improve physique or because of psychological attributes they offer.
- Performance-enhancing drugs will enable the athlete to train for longer and recover quickly.
- Athletes may feel under pressure from coaches, media and self.
- Some may experience fear from 'not making it'. The huge increase in rewards for winning means that the temptation to take drugs has become very great for some athletes.
- Performance enhancing drugs are easily accessible and testing is not always accurate. As advances in technology progress at a rapid speed, many new substances may not be easily detectable.
- The use of substance abuse can be detrimental to the athlete's health and it could be potentially lethal.
- Drug use has been one of the main areas of deviance in sport, which is conflicting with the general spirit of sport.
- Not all athletes have the same access to performance enhancing drugs,

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it is important for the authorities to continue to fight the battle against the drugs cheats, this will ensure a level playing field for all performers as some athletes are successful without the use of drugs.

- Fame
- Prolong career, extend their career

All other valid points will be given credit.

Level 1 ([1]–[4])

Overall impression: Basic

- Basic knowledge and understanding of why elite level athletes may feel under pressure to use illegal methods to succeed in their sport. The candidate may provide basic examples.
- Demonstrates a basic ability to discuss why elite level athletes may feel under pressure to use illegal methods to succeed in their sport. Candidate will give basic explanations of the reasons why elite level athletes may feel under pressure.
- Quality of written communication is basic. The candidate makes a limited selection and use of an appropriate form and style of writing. The organisation of material may lack clarity and coherence. There is little use of specialist vocabulary. Presentation, spelling, punctuation and grammar may be such that intended meaning is not clear.

Level 2 ([5]–[8])

Overall impression: Good

- Good knowledge and understanding of why elite level athletes may feel under pressure to use illegal methods to succeed in their sport. The candidate may provide some examples.
- Demonstrates a good ability to discuss why elite level athletes may feel under pressure to use illegal methods to succeed in their sport. Candidate will provide some examples and explanations of the reasons why elite level athletes may feel under pressure.
- Quality of written communication is good. The candidate makes a reasonable selection and use of an appropriate form and style of writing. Relevant material is organised with some clarity and coherence. There is appropriate use of specialist vocabulary. Presentation, spelling, punctuation and grammar are sufficiently competent to make meaning evident.

Level 3 ([9]–[12])

Overall impression: Excellent

- Excellent knowledge and understanding of why elite level athletes may feel under pressure to use illegal methods to succeed in their sport. The candidate will provide fully developed examples and show excellent understanding of each one.
- Demonstrates an excellent ability to discuss why elite level athletes may feel under pressure to use illegal methods to succeed in their sport. The candidate will provide thorough explanation and will use a variety of relevant examples.
- Quality of written communication is excellent. The candidate successfully selects and uses an appropriate form and style of writing. Relevant material is organised with a high degree of clarity and coherence. There is an extensive and accurate use of specialist vocabulary. Presentation, spelling, punctuation and grammar are of a high standard and ensure that the meaning is clear.

[0] is awarded for a response not worthy of credit
(AO3)

[12]

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- 4 (a) Some examples of suitable points to be addressed by the candidate:
- Open–Closed Continuum – based on how much the performance of the skill is affected by factors outside of the performer, the environment.
- Open skill: skill affected by the environment or performed in a dynamic changing situation or environment, e.g. required for actions of other players, ball flight, acquiring and using external information, high level of decision making.
 - Skills involved in invasion games, striking and fielding games. Any activity where the performer has to attend to a changing environment, decide upon a course of action and be prepared to change it as the skill action is carried out. Typically externally paced.
 - Closed skill: skill performed in a stable, unchanging environment, where the environment has little or no impact on the performance of the skill. For example, in athletics, shot put, in gymnastics, vaulting, where there is no need to pay attention to the actions of others. (Skills involved in activities such as gymnastics, explosive athletic events, weightlifting). The actions are habitual, require little or no decision making. Typically self-paced.

Gross–Fine Continuum – the level of precision or fine control that the performer used when performing the skill.

- Gross Skill: a strong powerful movement requiring the use of the major muscle groups. Major body movement involving large muscle groups. Associated with strength, power and endurance often fundamental motor patterns eg. kicking, throwing a ball, shot put, long jump.
- Fine Skill: small, precise movement showing high levels of accuracy and co-ordination, using small muscle groups. Intricate, fine movements using small muscle groups, requiring good hand–eye coordination, for example, a tennis drop shot

Discrete–Serial - Continuous Continuum – whether it is possible to determine the movement has a definite beginning or end.

- Discrete skill: a movement with a clear beginning and end. A single specific skill, often short, brief. To repeat the performer must start from the beginning. For example, basketball free throw, tennis serve.
- Serial Skill: series of specific movements (often discrete) chained together in a sequence. The first movement in the series triggers the next. For example, a gymnastics routine, triple jump.
- Continuous Skill: no clear beginning and end, one end blends into the start phase of the next cycle. Movement is ongoing, the pattern is continuously repeated. End of one cycle leads to the beginning of the next. For example, running, swimming, cycling.

Externally Paced–Self Paced Continuum – how much control the performer has over the rate and the timing of the action.

- Externally Paced skill –a skill that is initiated by something other than the performer. The rate of movements is controlled or influenced by external factors, e.g. opponents, receiving a tennis serve. The initiation of the movement is controlled by external factors, for example, hockey defender reacting to an attacker.
- Self Paced skill: the performer decides when the movement will begin and the pace at which the movement is performed. The rate of movement is controlled by the performer, for example, speed of rotation in a gymnastics somersault or the initiation of the movement is controlled by the performer, e.g. the start of a dive.

Award [1] mark for each motor skill identified ($3 \times [1]$) and up to [3] marks for a description of the motor skills used. ($3 \times [3]$)

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All other valid points will be given credit.
(AO1, AO2)

[12]

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(b) The quality of written communication is assessed in this question.

Indicative Content:

Transfer of learning means the influence one skill has on the learning and performance of another. The process is extremely important in the acquisition of movement skills because practically all learning is based on some form of transfer.

Positive transfer

- Tends to occur when one skill helps or enhances the learning and performance of another skill. For example, the skill of throwing transfers positively to the racquet arm action of a tennis serve.
- There must be similarity in the structure of the skill components. The learner must be made aware of the transferable elements of a previously learned skill.
- Positive transfer can be enhanced if these similar elements are shown to learners. Learning situations need to allow for positive transfer. Variability of practice, such as two-touch football, would recreate the conditions experienced in a real game and help improve passing skills.
- The environmental conditions need to be similar to the real situation. For example, passing skills in hockey should for the most part be practised in a changing environment.

Negative transfer

- This is where the effects of the previously learned or practised skill is damaging to the learning or performance of the new skill. For example, the difference in throwing actions between a cricket return from the boundary (round arm) and a javelin throw (through the shoulder)
- Negative transfer can occur if the practice situation does not demand the same response as the playing or competitive situation.
- Arises when one skill hinders or impedes the learning and performance of another skill. For example, a loose wrist required to play a badminton shot transfers negatively to the firm wrist needed to perform a tennis stroke.
- Negative transfer can be avoided if conflicting skills, for example badminton and tennis, are not taught close together in time.

Zero transfer

- This is when there is no effect on current performance or learning from previous learning. This will occur when there is little or no similarity between the tasks or skills.
- When two skills are so different that there is no chance of any correlation, e.g. rock climbing and swimming

Bilateral transfer

- When a skill is moved across the body from limb to limb. For example, when a basketball player who can do a lay up with the right hand learns to do it with the left hand.
- Bilateral transfer refers to the capacity of the performer who may be dominantly right sided to perform a skill with the left side of the body. For example, a footballer who can shoot with the right and left foot with matching power and accuracy is a considerable asset to the team.

Retroactive transfer

- When a skill an athlete has been learning affects one the athlete already knows.
- This is the opposite of proactive and occurs when current learning or practice of a skill is affecting a skill that was learned in the past.
- Retroactive transfer occurs when a newly learned skill influences a previously learned skill. For example, the acquisition of a successful tennis serve may influence the previously learned overarm throw used in cricket.

Pro-active transfer

- previously learned skill influences learning of a new skill.

Level 1 ([1]–[4])**Overall impression: Basic**

- Basic knowledge and understanding of how the different types of transfer of learning can impact on sporting movements. The candidate may provide basic examples.
- Demonstrates a basic ability to evaluate how the different types of transfer of learning can impact on sporting movements. The candidate may provide basic explanations but does not examine in detail.
- Quality of written communication is basic. The candidate makes a limited selection and use of an appropriate form and style of writing. The organisation of material may lack clarity and coherence. There is little use of specialist vocabulary. Presentation, spelling, punctuation and grammar may be such that intended meaning is not clear.

Level 2 ([5]–[8])**Overall impression: Good**

- Good knowledge and understanding of how different types of transfer of learning can impact on sporting movements. The candidate will give some relevant examples.
- Demonstrates a good ability to evaluate how different types of transfer of learning can impact on sporting movements. The candidate will provide some explanations of the possible strategies introduced.
- Quality of written communication is good. The candidate makes a reasonable selection and use of an appropriate form and style of writing. Relevant material is organised with some clarity and coherence. There is appropriate use of specialist vocabulary. Presentation, spelling, punctuation and grammar are sufficiently competent to make meaning evident.

Level 3 ([9]–[12])**Overall impression: Excellent**

- Excellent knowledge and understanding of how different types of transfer of learning can impact on sporting movements. The candidate will provide fully developed examples and shows excellent understanding.
- Demonstrates an excellent ability to evaluate how different types of transfer of learning can impact on sporting movements. The candidate will provide thorough explanation and will use a variety of relevant examples.
- Quality of written communication is excellent. The candidate successfully selects and uses an appropriate form and style of writing. Relevant material is organised with a high degree of clarity and coherence. There is an extensive and accurate use of specialist vocabulary. Presentation, spelling, punctuation and grammar are of a high standard and ensure that the meaning is clear.

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[0] is awarded for a response not worthy of credit
(AO2, AO3)

[12]

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- 5 (a) (i) Some examples of suitable points to be explained by the candidate:
Cognitive stage:
- Performances in this stage are inconsistent. They lack fluency and success is not guaranteed.
 - Attention is all on the skill and cannot be directed elsewhere, relevant cues must be highlighted by the coach.
 - Learning occurs through trial and error, lots of mistakes at this stage.
 - Correct performances must be reinforced through demonstration – visual guidance or through manual guidance, if appropriate.
 - The performer is getting to know what needs to be done.
 - Success rate: 2 or 3 out of 10.

[4]

(ii) Associative stage:

- Associative stage of learning, the athlete understands the fundamentals of the skill and is in the process of refining the skill.
- Movement patterns are now more fluent and integrated.
- Simple aspects of the skill are becoming well learned, motor programmes begin to be formed.
- More trial and error, learning from the mistakes, error detection and correction, more consistent or effective.
- Better able to deal with more information and more complex information.
- Feedback should be specific, focusing on knowledge of performance.

Award [1] mark for key phrase, [2] marks for explanation and up to [4] marks for full explanation of each stage of learning.

(2 × [4])

All other valid points will be given credit.

(AO2)

[4]

(b) **The quality of written communication is assessed in this question.**

Indicative Content:

- Motivation may be defined as the biological, emotional, cognitive or social factors that activate and direct behaviour.
- Motivation is the direction and intensity of one's effort. Motivation can be intrinsic (coming from sources within the individual) or extrinsic (coming from sources outside the individual)
- Motivation is a combination of both internal and external stimuli interaction and varying in the influence they have on the performer at any particular time.

Motivation can have a positive effect on a performer. Winning provides a positive motive for further participation, this may last through the post-season and help the athlete prepare for the next season.

- Motivation can have a negative effect on a performer, losing can be demotivating, affecting the athlete's performance. Motivation will be high as the performer nears the start of the new season.
- Coaches' knowledge of players regarding what motivates them is useful when strategies need to be developed for individual athletes.
- Team selection and levels of performance may vary as the season progresses which will have an impact on the athlete's motivation.
- Personality factors can influence motivation, this may have shaped the performer's choice of sport and links to achievement motivation.

- The specific situation an athlete performs in will affect their decision to accept a challenge. Two determining situational factors are probability of success versus probability of failure.
 - Athletes may develop strategies to keep motivation levels high. Athletes have access to their coaches or other mentors when they feel their motivation levels are low.
 - As a coach it is important to engage the athletes in strategies that steer them towards success and to avoid a tendency to failure. Feedback is a central feature of this process, and self-esteem is enhanced through positive reinforcement. The behaviour of the coach can seriously affect the behaviour of the athlete.
 - Motivation is an essential component of successful sports performance.
 - NACH/NAF, drive theory, inverted u, treats, self esteem, goals, music
- All other valid points will be given credit.

Level 1 ([1]–[5])

Overall impression: Basic

- Basic knowledge and understanding of the different motivational strategies a coach could adopt to engage young athletes in sport. The candidate may provide basic examples.
- Demonstrates a basic ability to discuss the different motivational strategies a coach could adopt to engage young athletes in sport. Candidates will provide basic explanations of the advantages and disadvantages.
- Quality of written communication is basic. The candidate makes a limited selection and use of an appropriate form and style of writing. The organisation of material may lack clarity and coherence. There is little use of specialist vocabulary. Presentation, spelling, punctuation and grammar may be such that intended meaning is not clear.

Level 2 ([6]–[11])

Overall impression: Good

- Good knowledge and understanding of the different motivational strategies a coach could adopt to engage young athletes in sport. The candidate will give some relevant examples.
- Demonstrates a good ability to discuss the different motivational strategies a coach could adopt to engage young athletes in sport. Candidates will provide some explanations of the motivational strategies a coach could adopt.
- Quality of written communication is good. The candidate makes a reasonable selection and use of an appropriate form and style of writing. Relevant material is organised with some clarity and coherence. There is appropriate use of specialist vocabulary. Presentation, spelling, punctuation and grammar are sufficiently competent to make meaning evident.

Level 3 ([12]–[16])

Overall impression: Excellent

- Excellent knowledge and understanding of the different motivational strategies a coach could adopt to engage young athletes in sport. The candidate will provide fully developed examples and show excellent understanding of each one.
- Demonstrates an excellent ability to discuss the different motivational strategies a coach could adopt to engage young athletes in sport. Candidates will be able to discuss to an excellent level and elaborate with thorough explanation.
- Quality of written communication is excellent. The candidate successfully selects and uses an appropriate form and style of

writing. Relevant material is organised with a high degree of clarity and coherence. There is an extensive and accurate use of specialist vocabulary. Presentation, spelling, punctuation and grammar are of a high standard and ensure that the meaning is clear.

[0] is awarded for a response not worthy of credit
(AO2, AO3)

[16]

Total

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MARKS**

24

100