

Coimisiún na Scrúduithe Stáit  
State Examinations Commission

Leaving Certificate 2020

Marking Scheme

Physical Education

Higher Level

## **Note to teachers and students on the use of published marking schemes**

Marking schemes published by the State Examinations Commission are not intended to be standalone documents. They are an essential resource for examiners who receive training in the correct interpretation and application of the scheme. This training involves, among other things, marking samples of student work and discussing the marks awarded, so as to clarify the correct application of the scheme. The work of examiners is subsequently monitored by Advising Examiners to ensure consistent and accurate application of the marking scheme. This process is overseen by the Chief Examiner, usually assisted by a Chief Advising Examiner. The Chief Examiner is the final authority regarding whether or not the marking scheme has been correctly applied to any piece of candidate work.

Marking schemes are working documents. While a draft marking scheme is prepared in advance of the examination, the scheme is not finalised until examiners have applied it to candidates' work and the feedback from all examiners has been collated and considered in light of the full range of responses of candidates, the overall level of difficulty of the examination and the need to maintain consistency in standards from year to year. This published document contains the finalised scheme, as it was applied to all candidates' work. In the case of marking schemes that include model solutions or answers, it should be noted that these are not intended to be exhaustive. Variations and alternatives may also be acceptable. Examiners must consider all answers on their merits, and will have consulted with their Advising Examiners when in doubt.

## **Future Marking Schemes**

Assumptions about future marking schemes on the basis of past schemes should be avoided. While the underlying assessment principles remain the same, the details of the marking of a particular type of question may change in the context of the contribution of that question to the overall examination in a given year. The Chief Examiner in any given year has the responsibility to determine how best to ensure the fair and accurate assessment of candidates' work and to ensure consistency in the standard of the assessment from year to year. Accordingly, aspects of the structure, detail and application of the marking scheme for a particular examination are subject to change from one year to the next without notice.

## Notes regarding the Marking Scheme

In considering this marking scheme, the following should be noted:

- The support notes in many cases contain key phrases which must appear in the candidate's answer in order to merit the assigned marks.
- The detail required in any answer is determined by the context and the manner in which the question is asked and by the number of marks assigned to the answer in the examination paper.
- Words, expressions or phrases must be correctly used in context and not contradicted, and where there is evidence of incorrect use or contradiction, the marks may not be awarded.
- As a general rule, if in doubt about the validity of any answers, examiners must consult their advising examiner before awarding marks.
- The suggestions, examples etc in the scheme are not exhaustive and alternative valid answers etc. are acceptable.

The answers to subsections of a question may not necessarily be tied to a specific mark eg there may be three parts to a question, and a total of 12 marks allocated to the question. The marking scheme might be as follows: 6 + 3 +3. This means the first correct answer encountered is awarded 6 marks and each subsequent correct answer is awarded 3 marks.

**Section A****80 marks****Question 1****(2 Marks)**

Description	Marks
Identifies axis as longitudinal (also accept vertical/ mediolateral axis)	1 mark
Identifies plane as transverse (also accept horizontal/ mediolateral plane)	1 mark

**Question 2****(6 Marks)**

Description	Marks
Accurate discussion of the importance of hydration for a long distance runner  Very good discussion 5-6 m Good discussion 3-4 m Fair discussion 1-2 m	

**Question 3****(6 Marks)****(a)**

Description	Marks
Identifies test to measure flexibility	1 mark
Brief description of test	1 mark

**(b)**

Description	Mark
Accurate description of how flexibility can contribute to improved performance relevant to physical activity named  Good description 3-4 m Fair description 1 -2 m	


**Question 4****(8 Marks)**

Description	Marks
Two types of feedback	1 mark+ 1 mark
Two accurate explanations Note: type of feedback explained must be appropriate for an athlete with a visual impairment. Very good explanation 3 m Good explanation 2 m Fair explanation 1 m e.g. <ul style="list-style-type: none"> <li>intrinsic feedback, kinaesthetic</li> <li>extrinsic feedback, verbal</li> </ul>	3 marks + 3 marks

**Question 5****(8 Marks)****(a)**

Description	Marks
Identifies lever as 1st (first) class	2 marks

**(b)**

Description	Marks
3 x 2 marks for each correctly labelled part of the first class lever system	6 marks
 <p>Full 2 marks - Load – javelin; Effort- tricep; Fulcrum – elbow Also accept load (resistance), effort (force), fulcrum (axis)</p>	

**Question 6****(8 Marks)**

Description	Marks
Two reasons outlined	4 marks + 4 marks
Accurate description of why regular participation in physical activity can improve mental health Good description 3-4 m Fair description 1 -2 m	

**Question 7****(8 Marks)**

Description	Marks
Two ways discussed	4 marks + 4 marks
Accurate discussion of how mental preparation can help improve performance relevant to named physical activity Good discussion 3-4 m Fair discussion 1-2 m	

**Question 8****(10 Marks)****(a)**

Description	Marks
Identifies two Irish anti-doping rule violations	2 marks + 2 marks
2.1 The Presence of a Prohibited Substance or its Metabolites or Markers in an Athlete's Sample 2.2 Use or Attempted Use by an Athlete of a Prohibited Substance or a Prohibited Method 2.3 Evading, Refusing or Failing to Submit to Sample Collection 2.4 Committing Three Whereabouts Failures in Twelve Months 2.5 Tampering or Attempted Tampering with any Part of Doping Control 2.6 Possession of a Prohibited Substance or a Prohibited Method 2.7 Trafficking or Attempted Trafficking in any Prohibited Substance or a Prohibited Method 2.8 Administration or Attempted Administration to any Athlete In-Competition of any Prohibited Substance or Prohibited Method, or Administration or Attempted Administration to any Athlete Out-of-	

<p>Competition of any Prohibited Substance or any Prohibited Method that is prohibited Out-of-Competition</p> <p>2.9 Complicity - Assisting, encouraging, aiding, abetting, conspiring, covering up or any other type of intentional complicity involving an anti-doping rule violation, Attempted anti-doping rule violation or violation of Article 10.8.1 by another Person</p> <p>2.10 Prohibited Association - Athletes and other Persons must not work with coaches, trainers, physicians or other Athlete Support Personnel who are Ineligible on account of an anti-doping rule violation or who have been criminally convicted or professionally disciplined in relation to doping. Some examples of the types of association which are prohibited include: obtaining training, strategy, technique, nutrition or medical advice; obtaining therapy, treatment or prescriptions; providing any bodily products for analysis; or allowing the Athlete Support Person to serve as an agent or representative</p> <p>Sport Ireland (2019) The Irish Anti-Doping Rules 2015 Version 2.0. pages 14-19.</p>	
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(b)

Description	Marks
<p>Accurate discussion of how anabolic steroids affect performance</p> <p>Very good discussion 5-6 m</p> <p>Good discussion 3-4 m</p> <p>Fair discussion 1 -2 m</p>	

**Question 9**

**(12 Marks)**

(a)

Description	Marks
Accurate explanation of adapted physical activity	2 marks
One relevant example	2 marks

(b)

Description	Marks
<p>Two barriers to physical activity participation for people with a disability outlined</p> <p>Good description – 2 m</p> <p>Fair description – 1 m</p>	<p>2 marks + 2 marks</p>

(c)

Description	Marks
Accurate local level response to addressing barriers to physical activity participation for people with a disability proposed Note: Response must be related to barriers identified in question 9 (b)	3 marks + 1 mark

**Question 10**

**(12 marks)**

Description	Marks
Knowledge is consistently accurate and well detailed Analysis is coherently and consistently made between different relevant factors and their impact Well argued, independent opinion/ judgements/conclusions which are well supported by relevant examples	10 -12
Knowledge is usually accurate and detailed Analysis is often made between different relevant factors and their impact and is usually coherent Independent opinions and judgements will be present but may not always be supported by relevant examples	7-9
Knowledge is sometimes accurate with some detail Analysis is sometimes made between different relevant factors and their impact but may lack coherence Opinions and judgements given but often unsupported by relevant examples	4-6
Basic knowledge and little understanding There may be little or no analysis between different relevant factors and their impact Little or no attempt to give opinion or judgement	1-3
No relevant content/ Incorrect response	0



<b>Section B</b>	<b>Case Study</b>	<b>50 marks</b>
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**Question 11**

**(50 marks)**

**(a) (i)**

<b>Description</b>	<b>Marks</b>
Identifies reversibility (also accept detraining)	2 marks
Description of reversibility	2 marks

**(ii)**

<b>Description</b>	<b>Marks</b>
Relevant reasons suggested	4 marks + 2 marks

**(iii)**

<b>Description</b>	<b>Marks</b>
Knowledge is sometimes accurate with some detail Considers the argument that reversibility has an impact on skill in a way that uncovers the assumptions and interrelationships of the issue Opinions and judgements given which may be supported by relevant physical activity examples	4-6
Basic knowledge and little understanding Little or no consideration given to the argument that reversibility has an impact on skill in a way that uncovers the assumptions and interrelationships of the issue Little or no attempt to give opinion or judgement	1-3
No relevant content/ Incorrect response	0

**(b) (i)**

<b>Description</b>	<b>Marks</b>
Identifies two key patterns	1 mark + 1 mark
Brief description of each pattern	2 marks + 2 marks
<ul style="list-style-type: none"> <li>The tennis player has 4 hours of tennis per week. This happens every week and does not change.</li> <li>Strength training is completed every week in either one or two hour blocks.</li> <li>Flexibility training is completed in all of the five weeks in one hour blocks.</li> </ul>	

(ii)

Description	Marks
Relevant reasons suggested e.g. periodisation, principles of training	3 marks + 1 mark

(iii)

Description	Mark
Relevant reasons suggested	3 marks + 1 mark

(c)

Description	Marks
Using evidence to draw a conclusion about Murray's second serve	2 x 6 (3 +3) marks
<p>This breakdown of data gives Roger Federer clear empirical data on Murray's second serve.</p> <ul style="list-style-type: none"><li>• Only one ace on his second serve. Whilst a second serve is never as good as a first one this data shows that Murray consistently does not have a second serve that can get him out of trouble. Having only one ace on his second serve over a number of matches makes it difficult for him to constantly pressurise opponents on his serve.</li><li>• Murrays serve goes short in the service box a lot of the time thus allowing his opponent more time to adjust and return the ball. This short serve probably generates less speed and as a result his opponent has more time to react.</li><li>• The data suggests that Murray will put most of his second serve's to Federer's left. Therefore, Federer can either come to the net off his backhand or run around and hit on his forehand. Federer can attack the second serve.</li></ul>	

(d)

Description	Marks
<p>Accurate discussion of implications for tennis if high profile players were caught for anti-doping violations</p> <p>Very good discussion 7-8 marks</p> <p>Good discussion 5-6 marks</p> <p>Fair discussion 3-4 marks</p> <p>Poor discussion 1 -2 marks</p> <p>Do NOT accept implications on performer</p>	

**Section C****120 marks**

There are 5 questions of which candidates must answer 3.

**Question 12****(40 marks)****(a) (i)**

Description	Marks
Accurate discussion of the difference between skill and ability  Very good discussion 5-6 m  Good discussion 3-4 m  Fair discussion 1 -2 m	
e.g.  Ability – natural/ inbuilt.  Skill – learned behaviour “A learned action/behaviour with the intention of bringing about predetermined results with maximum certainty and minimum outlay of time or energy” (Knapp, 1963)	

**(ii)**

Description	Marks
Two types of skill named	1 mark + 1 mark
Two types of skill named are defined	1 mark + 1 mark
e.g. <ul style="list-style-type: none"><li>• Cognitive – the thinking skills. They are used in decision making and problem solving</li><li>• Perceptual – used to interpret information gathered through your senses to guide your actions</li><li>• Psychomotor (motor) skills – used by your brain to control physical movements</li></ul> Do NOT accept skill classifications	

**(b)**

Description	Marks
Knowledge is consistently accurate and well detailed Analysis is coherently and consistently made between different relevant factors and their impact Well argued, independent opinion/ judgements/conclusions which are well supported by relevant examples	9-10
Knowledge is usually accurate and detailed	6-8

Analysis is often made between different relevant factors and their impact and is usually coherent Independent opinions and judgements will be present but may not always be supported by relevant examples	
Knowledge is sometimes accurate with some detail Analysis is sometimes made between different relevant factors and their impact but may lack coherence Opinions and judgements given but often unsupported by relevant examples	3-5
Basic knowledge and little understanding There may be little or no analysis between different relevant factors and their impact Little or no attempt to give opinion or judgement	1-2
No relevant content/ Incorrect response	0

(c)

Description	Marks
<p>In depth detail learning model described</p> <p>Very good description 7-8 m</p> <p>Good description 5-6 m</p> <p>Fair description 3-4 m</p> <p>Poor description 1 -2 m</p>	8 marks
<p>e.g. Information Processing Model of Learning</p> <pre> graph TD     1["1. Perceiving (Input) Cues or stimuli from the senses"] --&gt; 2["2. Deciding (Processing) Processing of data received by the brain"]     2 --&gt; 3["3. Acting (Output) Performance of necessary movement"]     3 --&gt; 4["4. Evaluating (Feedback) Information about the performance"]     4 --&gt; 1 </pre>	

(d)

Description	Marks
Knowledge is consistently accurate and well detailed Analysis is coherently and consistently made between different relevant factors and their impact Well argued, independent opinion/ judgements/conclusions which are well supported by relevant physical activity examples	10-12
Knowledge is usually accurate and detailed Analysis is often made between different relevant factors and their impact and is usually coherent Independent opinions and judgements will be present but may not always be supported by relevant physical activity examples	7-9
Knowledge is sometimes accurate with some detail Analysis is sometimes made between different relevant factors and their impact but may lack coherence Opinions and judgements given but often unsupported by relevant physical activity examples	4-6
Basic knowledge and little understanding There may be little or no analysis between different relevant factors and their impact Little or no attempt to give opinion or judgement	1-3
No relevant content/ Incorrect response	0

**Question 13****(40 marks)****(a)**

Description	Marks
For each relevant characteristic listed award 1 mark up to a maximum of 6 marks or where brief description of identified characteristic provided award 2 marks up to a maximum of 6 marks	6

**(b)**

Description	Marks
Knowledge is consistently accurate and well detailed Analysis is coherently and consistently made between different relevant factors and their impact Well argued, independent opinion/ judgements/conclusions which are well supported by relevant examples	9-10
Knowledge is usually accurate and detailed Analysis is often made between different relevant factors and their impact and is usually coherent Independent opinions and judgements will be present but may not always be supported by relevant examples	6-8
Knowledge is sometimes accurate with some detail Analysis is sometimes made between different relevant factors and their impact but may lack coherence Opinions and judgements given but often unsupported by relevant examples	3-5
Basic knowledge and little understanding There may be little or no analysis between different relevant factors and their impact Little or no attempt to give opinion or judgement	1-2
No relevant content/ Incorrect response	0

**(c) (i)**

Description	Marks
Two physical fitness demands related to officiating rugby	2 marks + 2 marks
e.g. Cardiorespiratory endurance Speed Muscular endurance	

(ii)

Description	Marks
Two different physical fitness training methods relevant to either muscular endurance, cardiorespiratory endurance or speed for a rugby official to be discussed e.g. interval training Do NOT accept principles of training	4 marks + 4 marks
Accurate discussion of training method appropriate to each physical fitness demand  Good discussion 3-4 m Fair discussion 1 -2 m	

(d) (i)

Description	Marks
Accurate description of a variety of approaches to physical activity promotion in the community	8 marks
Very good description 7-8 m Good description 5-6 m Fair description 3-4 m Poor description 1-2 m	

(ii)

Description	Marks
Response must relate to approaches described in question 13d (i)	4 Marks
Good conclusion 3-4 m Fair conclusion 1-2 m	

**Question 14****(40 marks)****(a)**

Description	Marks
<p>Rules are agreed upon sets of principles, policies, criteria, descriptions and/or conducts governing a sport or physical activity for reasons of safety, sportsmanship, equipment or facility design and competitiveness.</p> <p>Roles – various roles such as defenders/attackers in gameplay and captains. Also non playing roles such as referee, coach etc.</p> <p>Rituals – a certain behaviour or action that a sports performer carries out with the belief that these behaviours have a specific purpose, or power, to influence their performance (e.g. the Haka)</p> <p>Conventions – procedural protocols (e.g. soccer- flip of coin)</p> <p>Do NOT accept superstitions for rituals</p>	4 x 2 marks

**(b)**

Description	Marks
Two weaknesses of a goalkeeper identified	2 marks + 2 marks
Explanation of how you would exploit the weakness identified relevant to physical activity named	1 mark + 1 mark

**(c)**

Description	Marks
<p>Accurate explanation of a wide range of relevant strategies to address overtraining and fatigue</p> <p>Very good explanation 10-12</p> <p>Good explanation 7-9</p> <p>Fair explanation 4-6</p> <p>Poor explanation 1-3</p>	



(d) (i)

Description	Marks
Accurate description of a McClenaghan's performance from an aesthetic or artistic perspective Do NOT accept characteristics of a skilled performance	4 marks
Good description 3-4 m Fair description 1 -2 m	

(ii)

Description	Marks
Accurate description of a range of strategies a coach can use to support an athlete's ongoing motivation to practice or perform	4+3+3

**Question 15****(40 marks)****(a) (i)**

Description	Marks
Respect, integrity, fairness or equity defined – 1 m	3 x 2 Marks
Detailed definition of respect, integrity, fairness or equity – 2 m	

**(ii)**

Description	Marks
Knowledge is consistently accurate and well detailed Analysis is coherently and consistently made between different relevant factors and their impact Well argued, independent opinion/ judgements/conclusions which are well supported by relevant examples	9-10
Knowledge is usually accurate and detailed Analysis is often made between different relevant factors and their impact and is usually coherent Independent opinions and judgements will be present but may not always be supported by relevant examples	6-8
Knowledge is sometimes accurate with some detail Analysis is sometimes made between different relevant factors and their impact but may lack coherence Opinions and judgements given but often unsupported by relevant examples	3-5
Basic knowledge and little understanding There may be little or no analysis between different relevant factors and their impact Little or no attempt to give opinion or judgement	1-2
No relevant content/ Incorrect response	0

(b)

Description	Marks
Benefits of chocolate milk after training over water  Very good explanation 5-6 m Good explanation 3-4 m Fair explanation 1-2 m	6 marks
Compared to water it has double the amount of carbohydrate (source of energy) and protein content (promotes muscle growth and repair) which help replenish fatigued muscles.  It has a nutritional bonus of calcium, which has a role in muscular contraction and includes just a little sodium and sugar additives that help recovering athletes retain water and regain energy.	

(c) (i)

Description	Marks
Accurate discussion of coverage of sport in the media from the perspective of the participation of one of the following groups: women; older adults; people with physical disability; people with intellectual disability; different ethnic groups; different socio-economic groups  Very good discussion 5-6 m Good discussion 3-4 m Fair discussion 1 -2 m	

(ii)

Description	Marks
Note: Candidates must respond to this question using a different group to the group used to answer question 15 (c) (i).	12 marks
Accurate discussion of a range of developments in physical activity and sport over the last 20 years for one of the following groups: women; older adults; people with physical disability; people with intellectual disability; different ethnic groups; different socio-economic groups  Very good discussion 10-12 m Good discussion 7-9 m Fair discussion 4-6 m Poor discussion 1-3 m	

**Question 16**
**(40 Marks)**
**(a)**

Description	Marks
Accurate examination of technological innovations that may increase a performer's motivation to take part in Physical Education classes	3+3+2

**(b) (i)**

Description	Marks
Fitness test for speed described	3 marks
Fitness test for strength described	3 marks
Very good description 3 m Good description 2 m Fair description 1 m Irrelevant description or not suitable for heptathlete 0 m	

**(ii)**

Description	Marks
Accurate discussion of a strategy to enhance concentration during two day heptathlon event Good discussion 3-4 m Fair discussion 1-2 m	

**(iii)**

Energy System	Heptathlon event	Explanation Good explanation 2 m Fair explanation 1 m
<b>Anaerobic – alactacid</b>	Shot-Put (2 marks)	The shot-put requires a short explosive burst of energy. The Adenosine Triphosphate – Creatine Phosphate (ATP-CP) does exactly that, through the breakdown of ATP and CP stored in the muscles. Lasts approximately 8 -10 seconds.
<b>Anaerobic - lactic</b>	200m (2 marks)	The 200m could take from 20 to 30 seconds The lactic acid system kicks in when stores of ATP in the muscles are depleted. With the aid of enzymes, glycogen is converted into lactic acid. During this reaction, energy is released, and this energy is used to recombine the ADP and phosphate to ATP. The rapid production of ATP through the lactic acid system cannot be sustained for very long, as the accumulation of lactic acid in the

		muscles will prevent efficient muscle contraction. It will produce more energy to last about 90 seconds.
<b>Aerobic</b>	800m (2 marks)	These athletes' times can range from 2.05 to 2.35 thus the aerobic system is used here. It kicks in after 90 secs and the body begins to supply active muscles with oxygen. The presence of oxygen allows aerobic respiration to break down the glucose for ATP.

(c)

<b>Description</b>	<b>Marks</b>
Relevant strategies suggested	3+3+2+2
<p>Developed psychological skills – heptathletes who are confident tend to be successful in combined events</p> <p>Rational nutrition plan (food and drink) – based on the sequence of events</p> <p>Understand how scoring tables work</p> <p>Have a good knowledge of their competitors</p> <p>Level of tactical preparation for the heptathlon is key throughout the event, examples include – optimal warm up prior to an event and between events (in order to achieve a good performance at the first attempt), correct choice of starting height in the high jump, correct choice of tempo in the 800 metres</p> <p>Well equipped for the competition – clothing, spikes etc.</p>	

## Physical Activity Project Structure

Section	Content	Marks
<b>A</b>	<b>Performance Analysis</b> <ul style="list-style-type: none"> <li>• Provide a summary of the performance analysis undertaken and the data collected</li> <li>• Analyse the performance – what the data tells you about your/peer’s performance based on sound theoretical principles</li> </ul>	<b>24</b>
<b>B</b>	<b>Identification of four performance goals and evidence of on-going training/ practice and reflection</b> <ul style="list-style-type: none"> <li>• Formulate four distinct performance goals</li> <li>• Explain the rationale for the selection of each of these four performance goals based on sound theoretical principles</li> <li>• Design and implement a training/practice programme which addresses the goals identified based on sound theoretical principles</li> <li>• Include four pieces of ongoing reflection – one reflection for each of the four performance goals focusing on your experience of working to improve your/peer’s performance by addressing each goal</li> </ul>	<b>44</b>
<b>C</b>	<b>Concluding analysis</b> <ul style="list-style-type: none"> <li>• Provide a summary of the results following a repeat of the performance analysis process to evaluate your/ peer’s progress at the end of the programme</li> <li>• Complete a final reflection about the effectiveness of the programme. Each of the performance goals should be addressed in this context</li> <li>• Include suggestions for next steps for further improvement</li> </ul>	<b>16</b>
<b>Overall coherence</b> <ul style="list-style-type: none"> <li>• Relates to the overall preparation, planning, implementation and completion of the Physical Activity Project</li> </ul>		<b>16</b>
<b>References and Bibliography</b> <ul style="list-style-type: none"> <li>• Include full references for all sources cited in your report. You should also include details of additional sources of information that you have consulted but have not cited in your report.</li> </ul>		

## Leaving Certificate Physical Education – Project Marking Scheme 2020

7-8 Very Good		5-6 Good	3-4 Fair	1-2 Poor
Section	Description	Marks		
<b>A</b>	<b>Performance Analysis</b>	<b>24</b>		
	Performance analysis undertaken	8		
	Summary of data collected	8		
	Analyse the performance	8		
<b>B</b>	<b>Identification of four distinct performance goals and evidence of on-going training/ practice and reflection</b>	<b>44</b>		
	Performance goals	8		
	Rationale	8		
	Training/ Practice Programmes	20		
	Reflections	8		
<b>C</b>	<b>Concluding analysis</b>	<b>16</b>		
	Repeat analysis	4		
	Final reflection	8		
	Next steps	4		
	<b>Overall coherence</b>	<b>16</b>		
	Coherence – Section A	4		
	Coherence – Section B	4		
	Coherence – Section C	4		
	Overall	4		
<b>Total Marks</b>		<b>100</b>		

Coherence is an overall mark awarded for the relevance of the work in this section to the stated aims. Cannot be awarded coherence marks if only one aspect of the project is evident. Overall coherence relates to the overall completion of the project.

