

Name: _____

Mid Year Assessment Revision

Unit 3 - Physical Training

Date:

Time: 1 hour 30 minutes

Total marks available: 82

Total marks achieved: _____

Questions

Q1.

Health and fitness can be affected by exercise.

(a) Define the terms health and fitness.

(i) Health

(1)

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(ii) Fitness

(1)

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(b) State, using an example, how exercise can affect health and fitness.

(2)

(i) Effect of exercise on health

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(ii) Effect of exercise on fitness

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(Total for question = 6 marks)

Q2.

Components of fitness help us to perform well in sport.

Complete **Table 4** by:

- (a) Stating the component of fitness being described.
- (b) Giving a specific example of how the component of fitness is used in a sport of your choice.

Description	(a) Component of fitness being described	(b) Specific example of use in sport
The ability to exercise the entire body for long periods of time without tiring	(1)	(1)
The ability to change the position of the body quickly while maintaining control of the movement	(1)	(1)
The ability to retain the body's centre of mass above the base of support	(1)	(1)

Table 4

(Total for question = 6 marks)

Q3.

There are three types of health.

(a) State the type of health missing from this definition.

Health is a state of complete emotional and physical well-being, and not merely the absence of disease and infirmity.

(1)

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Figure 3 shows a high jumper.



(Source: © Soonthorn Wongsaita/Shutterstock)

Figure 3

To be fit for their event, high jumpers need high levels of some of the components of fitness.

Complete **Table 4** by:

(b) Stating the component of fitness used in each phase of the high jump.

(c) Stating the importance of each component of fitness during the stated phase of the high jump.

Event phase	(b) Component of fitness used in this phase	(c) Importance of the component of fitness in this phase of the high jump
Take off	(1)	(1)
Shape over the bar	(1)	(1)

Table 4

Figure 4 and **Figure 5** show a golfer and some hockey players participating in their sport.



Figure 4



Figure 5

(Source: © OtmarW/Shutterstock)
(Source: © takaimages/Shutterstock)

(d) Justify why having a good reaction time is **more important** to a hockey player than to a golfer.

(3)

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(Total for question = 8 marks)

Q4.

Fitness tests are designed to test specific components of fitness.

Complete **Table 3** by:

- (a) Stating the fitness test used to measure the component of fitness.
- (b) Stating a different sport or physical activity, for each of the components, in which an excellent rating would be an advantage.

Component of fitness	(a) Fitness test to measure the component of fitness	(b) Sport or physical activity in which an excellent rating would be an advantage
Cardiovascular fitness	(1)	(1)
Speed	(1)	(1)

Table 3

(c) Georgia is a long distance swimmer. She took part in some fitness tests. Her ratings for these fitness tests are shown in **Table 4**.

Fitness test	Rating
Illinois agility run test	Excellent
Vertical jump test	Excellent
One-minute press-up test	Poor
Harvard step test	Excellent

Table 4

Identify, using the data in **Table 4**, the component of fitness Georgia should focus on to improve her long distance swimming.

(1)

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(d) Explain **one** fitness class Georgia should attend to make her performance in the Harvard step test even better.

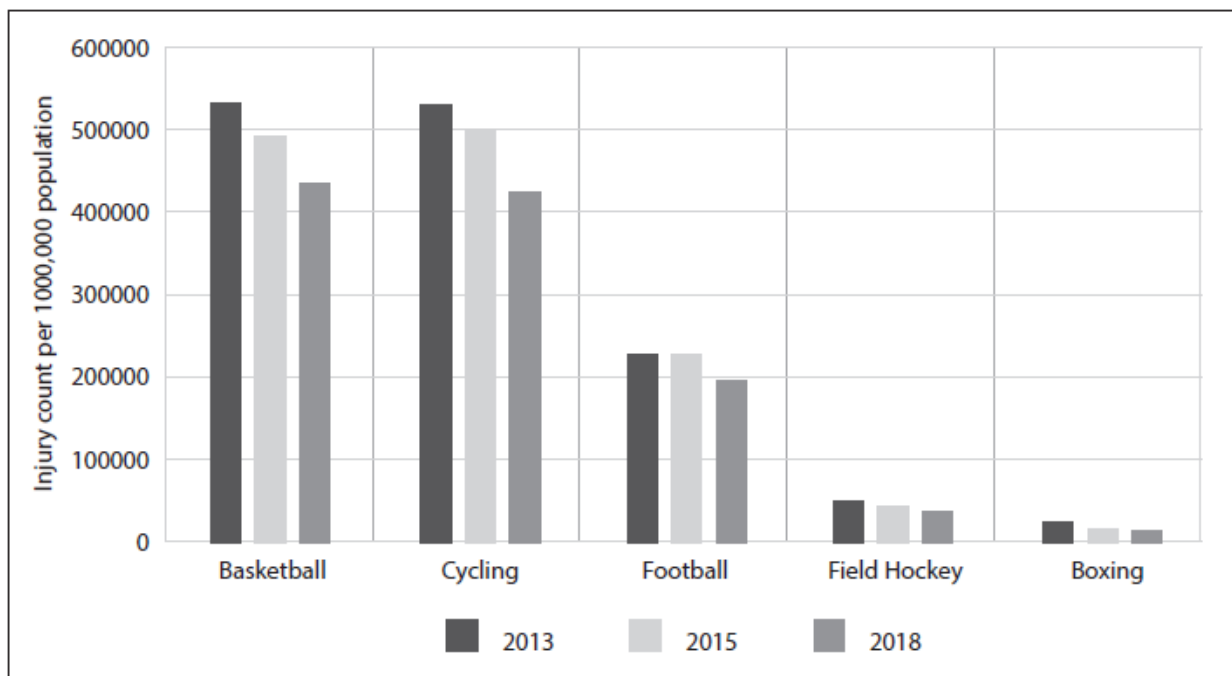
(3)

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(Total for question = 8 marks)

Q5.

Figure 7 shows sports injury data from 2013, 2015 and 2018.



(Adapted from: <https://injuryfacts.nsc.org>)

Figure 7

(a) Predict, **using Figure 7**, the **most likely** trend in the number of sports injuries for the year 2020.

(1)

(b) Identify, using the data in **Figure 7**, the **year** with the greatest number of sports injuries.

(1)

The enforcement of safety rules in sports and the correct application of the principles of training are methods to help reduce injury.

(c) Explain, using an example, **one other** method to reduce sports injuries.

(3)

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(d) Describe how **one** of the principles of training can reduce the risk of injury.

(3)

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Basketball and cycling have the highest injury rates for the sports shown in **Figure 7**.

Complete **Table 6** by:

(e) Stating **one different type** of sports injury that could occur in each sport.

(f) Stating how the type of sports injury might occur.

Sport	(e) Type of sports injury	(f) How sports injury might occur
Basketball	(1)	(1)
Cycling	(1)	(1)

Table 6

(g) Explain **one** reason why an elite athlete may be tempted to take narcotic analgesics if they become injured.

(2)

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An elite gymnast will spend a long time stretching as part of their warm-up, to help reduce the risk of injury.

(h) Explain **one other** reason why an elite gymnast will spend a long time stretching during their warm-up.

(2)

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(Total for question = 16 marks)

Q6.

Some athletes risk being banned from their sport by taking performance-enhancing drugs (PEDs).

Complete **Table 8** by:

- (a) Stating a sport or physical activity where the effects of the PED would be an advantage.
- (b) Stating an advantage of the PED to a performer in that sport or physical activity.

Performance-enhancing drug (PED)	(a) Sport or physical activity where effect of PED would be an advantage	(b) Advantage to performer in that sport or physical activity
Erythropoietin (EPO)	(1)	(1)
Anabolic steroids	(1)	(1)

Table 8

(Total for question = 4 marks)

Q7.

Performers who take performance enhancing drugs (PED) risk disqualification and ill-health but still take them for the benefits they can bring.

Complete **Table 6** by:

(a) Stating a positive effect of the PED.

(b) Identifying a sport or physical activity where taking the PED would increase chance of success in that sport or physical activity.

	(a) Positive effect of the PED	(b) Sport or physical activity where taking the PED would increase chance of success
Anabolic steroids	(1)	(1)
Beta blockers	(1)	(1)

Table 6

(Total for question = 4 marks)

Q8.

Figure 6 shows a runner's heart rate trace during an interval training session.

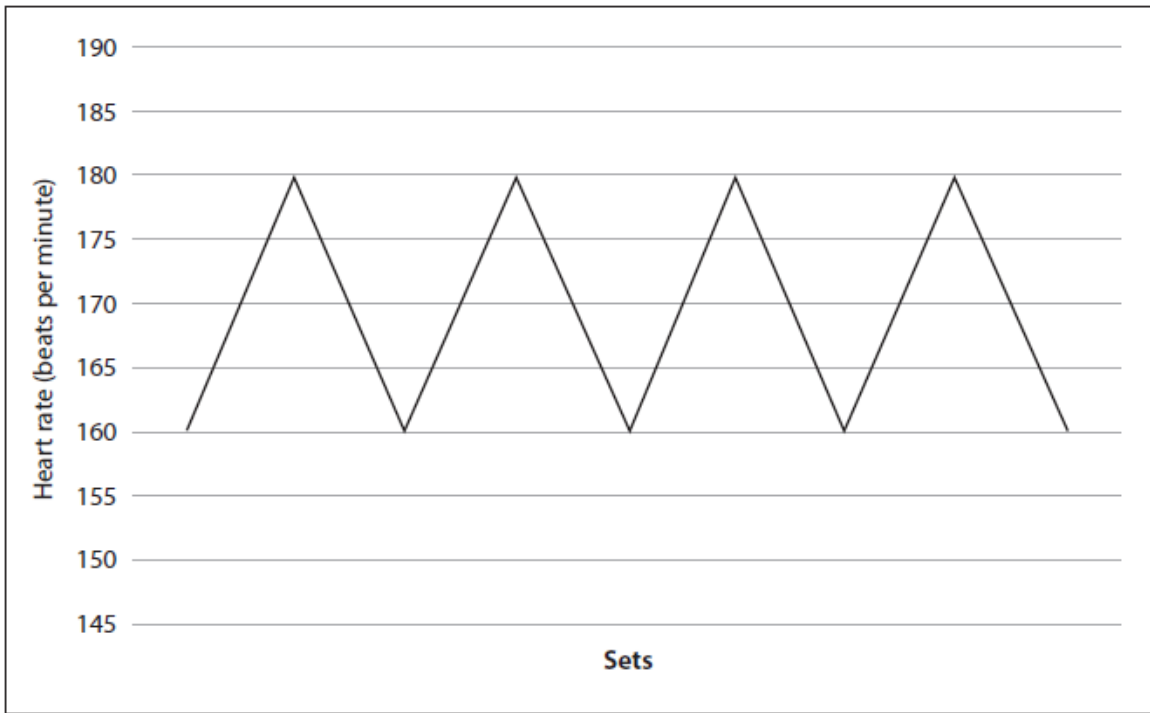


Figure 6

Explain **one** reason why the heart rate trace in **Figure 6** is from an interval training session.

(2)

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(Total for question = 2 marks)

Q9.

To make sure training is effective it should be monitored.

Explain why it is important to use fitness tests to monitor a training programme.

(3)

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(Total for question = 3 marks)

Q10.

Warm-ups are an important part of preparing for activity.

Complete **Table 5** below by stating:

- (a) Two phases of a warm-up.
- (b) How each phase helps a performer prepare for their activity.

	(a) Phase	(b) How phase helps a performer prepare for their activity
1	(1)	(1)
2	(1)	(1)

Table 5

(Total for question = 4 marks)

Q11.

Maddie is a 15-year-old cross-country runner. She trains regularly for her event.

An outline of one week of her training is shown in **Table 5**.

Day of week	Activity	Length of session
Sunday	Run at varying intensities through woodland	60 minutes
Monday	Rest	
Tuesday	Laps around the park varying her pace, running at 60% – 80% of her maximum heart rate	75 minutes
Wednesday	Rest	
Thursday	Run at varying intensities along the beach	60 minutes
Friday	Rest	
Saturday	X-country race	

Table 5

Use the information in **Table 5** to answer all parts of this question.

(a) Identify the training method Maddie is using in her training sessions.

(1)

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(b) State the component of fitness Maddie is training in these sessions.

(1)

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(c) Explain **two** principles of training Maddie has applied to her training sessions.

(2)

(i) Principle of training 1

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(2)

(ii) Principle of training 2

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(d) Give an example that shows how Maddie could apply the principle of progressive overload to one of her training sessions.

(1)

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(Total for question = 7 marks)

Q12.

Figure 6 shows Mason during a training session.

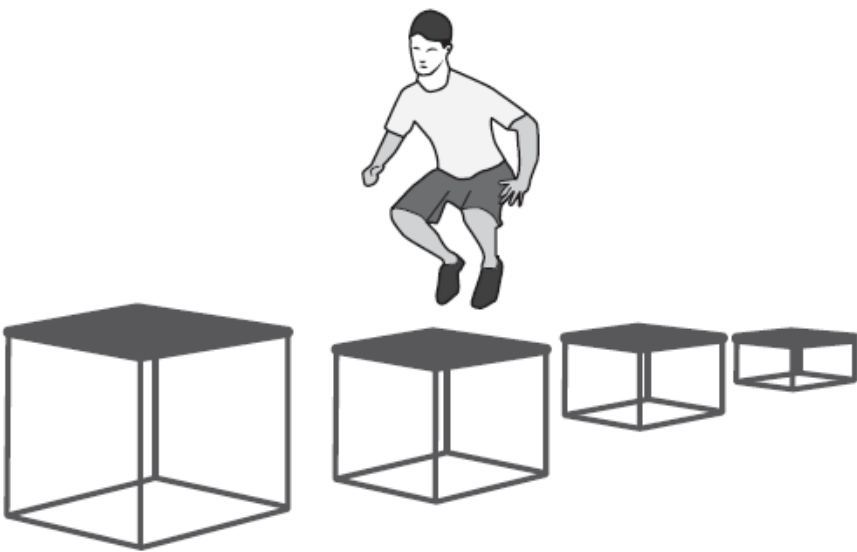


Figure 6

(a) Identify, using **Figure 6**, the method of training Mason is using.

(1)

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(b) State **one** advantage and **one** disadvantage of the training method shown in **Figure 6**.

(i) Advantage

(1)

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(ii) Disadvantage

(1)

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(Total for question = 3 marks)

Q13.

Dan trains regularly to improve his shot put performance and his general fitness.

Figure 8 shows Dan during a shot put competition.

Table 7 shows some of the long-term training effects on his body systems.



Figure 8

Long-term training effects
Increased bone density
Decreased resting heart rate
Muscle hypertrophy

Table 7

(Source: © Jim Parkin/Shutterstock)

Evaluate the training methods causing these long-term effects and their impact on Dan's shot put performance.

(Total for question = 9 marks)

Mark Scheme

Q1.

Question Number	Answer AO1 – 2 marks	Mark
(a) (i)&(ii)	<p>1 mark for correct statement of meaning of health and fitness.</p> <p>Health For example:</p> <ul style="list-style-type: none"> Emotional, physical and social well-being and not just the absence of disease. (1) <p>Fitness For example:</p> <ul style="list-style-type: none"> The ability to meet the demands of the environment. (1) <p>Accept other appropriate responses.</p>	(2)

Question number	Answer AO1 - 2 marks; AO2 – 2 marks	Mark
(b) (i)&(ii)	<p>Health For example:</p> <ul style="list-style-type: none"> • Exercise can cause a drop in resting blood pressure (1) which will improve physical health/reduce the risk of stroke/CHD (1) • Exercise means you can forget about what is worrying you (1) so improves your emotional health/reduces stress/makes you less anxious (1) • Exercise often involves teamwork (1) so can improve your social health (1) • Exercise can reduce depression (1) by giving you the opportunity to make new friends (1) <p>Fitness For example:</p> <ul style="list-style-type: none"> • aerobic fitness can increase (1) if a person attends an aerobics class / does continuous training/ aerobic training (1) • exercise can cause muscle hypertrophy/increase strength (1) through weight training (1) <p>Accept other appropriate responses. 1 mark for 'how' health is affected (AO1) 1 mark for linked example of the aspect of health increased/decreased or named relevant health issue (AO2)</p> <p>1 mark for example of aspect of fitness increased/decreased or named relevant training adaptation (AO2) 1 mark for 'how' stated fitness aspect is affected (AO1)</p>	(4)

Q2.

Question number	Answer	Mark				
	AO1 – 3 marks					
(a)	1 mark for each correct identification of the component of fitness from the description.					
	<table border="1"> <tr> <td>(a) Component of fitness being described</td> </tr> <tr> <td>Cardiovascular fitness (1)</td> </tr> <tr> <td>Agility (1)</td> </tr> <tr> <td>Balance (1)</td> </tr> </table>	(a) Component of fitness being described	Cardiovascular fitness (1)	Agility (1)	Balance (1)	
(a) Component of fitness being described						
Cardiovascular fitness (1)						
Agility (1)						
Balance (1)						
		(3)				

Question number	Answer	Mark								
	AO2 – 3 marks									
(b)	1 mark for each appropriate application of use of stated component of fitness in sport For example:									
	<table border="1"> <tr> <td></td> <td>(b) Specific example of use in sport</td> </tr> <tr> <td>(Cardiovascular fitness)</td> <td>Marathon running (1)</td> </tr> <tr> <td>(Agility)</td> <td>Dodging /avoiding a tackle (1)</td> </tr> <tr> <td>(Balance)</td> <td>A gymnast doing a handstand (1)</td> </tr> </table>		(b) Specific example of use in sport	(Cardiovascular fitness)	Marathon running (1)	(Agility)	Dodging /avoiding a tackle (1)	(Balance)	A gymnast doing a handstand (1)	
	(b) Specific example of use in sport									
(Cardiovascular fitness)	Marathon running (1)									
(Agility)	Dodging /avoiding a tackle (1)									
(Balance)	A gymnast doing a handstand (1)									
	Accept other appropriate responses.									
		(3)								

Q3.

Question number	Answer	Mark
	AO1 – 1 mark	
(a)	1 mark for correct identification.	
	<ul style="list-style-type: none"> Social 	
		(1)

Question number	Answer AO2 – 2 marks; AO3 – 2 marks	Mark									
(b&c)	<p>1 mark for each correct identification.</p> <table border="1"> <thead> <tr> <th>Event phase</th> <th>(b) Component of fitness used in phase</th> <th>(c) Importance of component of fitness in this phase</th> </tr> </thead> <tbody> <tr> <td>Take off</td> <td>Power (1)</td> <td>To get the height required to clear the bar (1)</td> </tr> <tr> <td>Shape over the bar</td> <td>Flexibility (1)</td> <td>To create the arched shape so body doesn't knock the bar (1)</td> </tr> </tbody> </table> <p>Accept other appropriate responses</p>	Event phase	(b) Component of fitness used in phase	(c) Importance of component of fitness in this phase	Take off	Power (1)	To get the height required to clear the bar (1)	Shape over the bar	Flexibility (1)	To create the arched shape so body doesn't knock the bar (1)	(4)
Event phase	(b) Component of fitness used in phase	(c) Importance of component of fitness in this phase									
Take off	Power (1)	To get the height required to clear the bar (1)									
Shape over the bar	Flexibility (1)	To create the arched shape so body doesn't knock the bar (1)									

Question number	Answer AO2 – 2 marks; AO3 - 1 mark	Mark
(d)	<p>For example:</p> <ul style="list-style-type: none"> • In hockey you have to make quick decisions (1) for example whether to pass or shoot before you are tackled (1) whereas in golf you are not being challenged for the ball/do not have the same time pressure therefore reaction time is not critical in this sport (1) • Golfer's time own shots when ready (1) a hockey player has to react to rapidly/make quick decisions (1) to a changing environment/eg before being tackled (1) <p>Accept other appropriate responses</p>	(3)

Q4.

Question number	Answer AO1 - 2 marks; AO2 - 2 marks	Mark									
(a) (b)	<p>For example:</p> <table border="1"> <thead> <tr> <th>Component of fitness</th> <th>(a) Fitness test to measure the component of fitness</th> <th>(b) Sport or physical activity in which an excellent rating would be an advantage</th> </tr> </thead> <tbody> <tr> <td>CV fitness</td> <td> Cooper 12-minute run Cooper 12-minute swim 12-minute Cooper run 12-minute Cooper swim Harvard step test (1) </td> <td> Marathon running X-country Long distance cycling Tennis match (1) </td> </tr> <tr> <td>Speed</td> <td> 30m sprint 35m sprint (1) </td> <td> Football 100m sprint (1) </td> </tr> </tbody> </table> <p>DNA same sport twice</p> <p>Accept other appropriate responses.</p> <p>1 mark for identification of fitness test for given component of fitness (AO1) 1 mark for each example clearly applied to component of fitness (AO2).</p>	Component of fitness	(a) Fitness test to measure the component of fitness	(b) Sport or physical activity in which an excellent rating would be an advantage	CV fitness	Cooper 12-minute run Cooper 12-minute swim 12-minute Cooper run 12-minute Cooper swim Harvard step test (1)	Marathon running X-country Long distance cycling Tennis match (1)	Speed	30m sprint 35m sprint (1)	Football 100m sprint (1)	(4)
Component of fitness	(a) Fitness test to measure the component of fitness	(b) Sport or physical activity in which an excellent rating would be an advantage									
CV fitness	Cooper 12-minute run Cooper 12-minute swim 12-minute Cooper run 12-minute Cooper swim Harvard step test (1)	Marathon running X-country Long distance cycling Tennis match (1)									
Speed	30m sprint 35m sprint (1)	Football 100m sprint (1)									

Question number	Answer AO3 - 1 mark	Mark
(c)	<p>1 mark for correct identification of component of fitness requiring focus in training.</p> <ul style="list-style-type: none"> Muscular endurance 	(1)

Question number	Answer AO1 - 1 mark; AO2 - 1 mark; AO3 - 1 mark	Mark
(d)	<p>For example:</p> <ul style="list-style-type: none"> • She could attend a spin class/ Aerobics classes (1) as this works/increases her aerobic fitness (1) With increased aerobic fitness she will have a lower heart rate after the Harvard step test / as she will be working continuously for over 20 minutes/it is continuous training (1). <p>Accept other appropriate responses.</p> <p>1 mark for appropriate choice of fitness class (AO2) 1 mark for cardiovascular fitness (AO1) 1 mark for justification of this choice of class (AO3)</p>	(3)

Q5.

Question number	Answer AO3 - 1 mark	Mark
(a)	<p>1 mark for correct identification.</p> <ul style="list-style-type: none"> • Each sport shows a downward trend over each year • Downwards trend <p>Accept other appropriate responses</p>	(1)

Question number	Answer AO3 - 1 mark	Mark
(b)	<p>1 mark for correct identification.</p> <ul style="list-style-type: none"> • 2013 	(1)

Question number	Answer AO1 – 2 marks; AO2 - 1 mark	Mark
(c)	<p>For example:</p> <ul style="list-style-type: none"> • Protective equipment/clothing (1) for example, hockey masks (1) will reduce the number of head injuries if the ball strikes the face/head (1) • Checking for faulty equipment before playing (1) eg a broken bench in a circuit training session/a weight not properly secured on a bar (1) so they don't twist an ankle as the bench breaks/the weight doesn't drop onto the foot (1) <p>Accept other appropriate responses</p> <p>1 mark for identification of injury prevention measure (AO1) 1 mark for example (AO2) 1 mark for reason why this measure reduces injury (AO1)</p>	(3)

Question number	Answer AO1 – 3 marks	Mark
(d)	<p>For example:</p> <ul style="list-style-type: none"> • Progressive overload/gradually increasing overload (1) will help prevent <u>overuse</u> injuries (1) as the body is not forced to work too hard (1) • Progressive overload/gradually increasing overload (1) will help the body adapt/not asking the body to do too much in one go (1) preventing <u>overuse</u> injuries (1) • Rest and recovery/by building in an appropriate number of rest days (1) this will prevent overtraining (1) as the body/muscle has time to repair before the next session (1) <p>Accept other appropriate responses</p> <p>1 mark for identification of injury prevention (AO1) 1 mark for expansion through description or naming of relevant principle (AO1) 1 mark for reason why this reduces risk of injury (AO1)</p>	(3)

Question number	Answer AO1 – 2 marks; AO2 – 2 marks	Mark									
(e&f)	<p>One mark for each correct identification.</p> <table border="1"> <thead> <tr> <th>Sport</th> <th>(e) Sports injury</th> <th>(f) How sports injury may occur</th> </tr> </thead> <tbody> <tr> <td>Basketball</td> <td>Sprain (1)</td> <td>Landing awkwardly after jumping to block a shot (1)</td> </tr> <tr> <td>Cycling</td> <td>Abrasion (1)</td> <td>Falling from bike (1)</td> </tr> </tbody> </table> <p>Accept other appropriate responses</p> <p>NB (f) must relate to (e).</p>	Sport	(e) Sports injury	(f) How sports injury may occur	Basketball	Sprain (1)	Landing awkwardly after jumping to block a shot (1)	Cycling	Abrasion (1)	Falling from bike (1)	(4)
Sport	(e) Sports injury	(f) How sports injury may occur									
Basketball	Sprain (1)	Landing awkwardly after jumping to block a shot (1)									
Cycling	Abrasion (1)	Falling from bike (1)									

Question number	Answer AO1 – 2 marks	Mark
(g)	<p>For example:</p> <ul style="list-style-type: none"> Masks the pain of the injury (1) so they can maintain training/carry on playing (1) <p>Accept other appropriate responses</p> <p>1 mark for identification of masking/hiding pain (AO1) 1 mark for expansion of reason (AO1)</p>	(2)

Question number	Answer AO2 – 1 mark – AO3 – 1 mark	Mark
(h)	<p>For example:</p> <ul style="list-style-type: none"> Stretching will improve the temperature of the gymnast's muscle/make their muscle more elastic/pliable (1) therefore they will have a wider range of movement to perform techniques correctly (1) <p>Accept other appropriate responses</p> <p>1 mark for identification of reason (AO2) 1 mark for expansion of reason (AO3)</p>	(2)

Question Number	Answer AO2 – 4 marks	Mark									
(a&b)	<p>For example:</p> <table border="1" data-bbox="268 264 1000 1122"> <thead> <tr> <th data-bbox="268 264 478 421">Performance-enhancing drug (PED)</th> <th data-bbox="478 264 715 421">(a) Sport or physical activity where effect of PED would be an advantage</th> <th data-bbox="715 264 1000 421">(b) Advantage to performer in that sport or physical activity</th> </tr> </thead> <tbody> <tr> <td data-bbox="268 421 478 728">Erythropoietin (EPO)</td> <td data-bbox="478 421 715 728">Marathon runner (1) <u>Long</u> distance runner (1) Triathlon (1) Tour de France/<u>long</u> distance cycling (1)</td> <td data-bbox="715 421 1000 728"> <ul style="list-style-type: none"> • Increased oxygen delivery (1) • Can work <u>aerobically</u> for longer (1) </td> </tr> <tr> <td data-bbox="268 728 478 1122">Anabolic steroids</td> <td data-bbox="478 728 715 1122">Sprinters (1) Weightlifters (1)</td> <td data-bbox="715 728 1000 1122"> <ul style="list-style-type: none"> • Allow performers to train <u>harder for longer</u> (1) • <u>Increase muscle mass/hypertrophy/build muscle</u> (1) • Greater increase in power/strength (1) • Speed up recovery time <u>so</u> train more frequently (1) </td> </tr> </tbody> </table> <p>Accept other appropriate responses EPO – any distance event Anabolic steroids – any power event</p> <p>1 mark for each correctly associated sport with the PED (AO2) 1 mark for each example of advantage to person form that sport/physical activity (AO2)</p>	Performance-enhancing drug (PED)	(a) Sport or physical activity where effect of PED would be an advantage	(b) Advantage to performer in that sport or physical activity	Erythropoietin (EPO)	Marathon runner (1) <u>Long</u> distance runner (1) Triathlon (1) Tour de France/ <u>long</u> distance cycling (1)	<ul style="list-style-type: none"> • Increased oxygen delivery (1) • Can work <u>aerobically</u> for longer (1) 	Anabolic steroids	Sprinters (1) Weightlifters (1)	<ul style="list-style-type: none"> • Allow performers to train <u>harder for longer</u> (1) • <u>Increase muscle mass/hypertrophy/build muscle</u> (1) • Greater increase in power/strength (1) • Speed up recovery time <u>so</u> train more frequently (1) 	(4)
Performance-enhancing drug (PED)	(a) Sport or physical activity where effect of PED would be an advantage	(b) Advantage to performer in that sport or physical activity									
Erythropoietin (EPO)	Marathon runner (1) <u>Long</u> distance runner (1) Triathlon (1) Tour de France/ <u>long</u> distance cycling (1)	<ul style="list-style-type: none"> • Increased oxygen delivery (1) • Can work <u>aerobically</u> for longer (1) 									
Anabolic steroids	Sprinters (1) Weightlifters (1)	<ul style="list-style-type: none"> • Allow performers to train <u>harder for longer</u> (1) • <u>Increase muscle mass/hypertrophy/build muscle</u> (1) • Greater increase in power/strength (1) • Speed up recovery time <u>so</u> train more frequently (1) 									

Q7.

Question number	Answer AO1 - 2 marks; AO2 - 2 marks	Mark									
<p>(a) (b)</p>	<p>For example:</p> <table border="1" data-bbox="260 277 1134 958"> <thead> <tr> <th data-bbox="260 277 491 398">Performance-enhancing drug (PED)</th> <th data-bbox="491 277 818 398">(a) Positive effect of the PED</th> <th data-bbox="818 277 1134 398">(b) Sport where effect of PED would be an advantage</th> </tr> </thead> <tbody> <tr> <td data-bbox="260 398 491 797">Anabolic steroids</td> <td data-bbox="491 398 818 797"> Allow performers to train harder for longer (1) Increase power/strength (1) Hypertrophy Increased muscle mass/muscle growth Speed up recovery time (1) </td> <td data-bbox="818 398 1134 797"> Sprinting (1) Weightlifting (1) Boxing (1) </td> </tr> <tr> <td data-bbox="260 797 491 958">Beta blockers</td> <td data-bbox="491 797 818 958"> Reduce anxiety (1) Reduce muscle tremor/ shaking (1) Reduce heart rate (1) </td> <td data-bbox="818 797 1134 958"> Archery (1) Diving (1) </td> </tr> </tbody> </table> <p>Accept other appropriate responses.</p> <p>1 mark for each statement of positive effect of PED (AO1) 1 mark for each example of sport/physical activity where effect would be an advantage (AO2).</p>	Performance-enhancing drug (PED)	(a) Positive effect of the PED	(b) Sport where effect of PED would be an advantage	Anabolic steroids	Allow performers to train harder for longer (1) Increase power/strength (1) Hypertrophy Increased muscle mass/muscle growth Speed up recovery time (1)	Sprinting (1) Weightlifting (1) Boxing (1)	Beta blockers	Reduce anxiety (1) Reduce muscle tremor/ shaking (1) Reduce heart rate (1)	Archery (1) Diving (1)	<p>(4)</p>
Performance-enhancing drug (PED)	(a) Positive effect of the PED	(b) Sport where effect of PED would be an advantage									
Anabolic steroids	Allow performers to train harder for longer (1) Increase power/strength (1) Hypertrophy Increased muscle mass/muscle growth Speed up recovery time (1)	Sprinting (1) Weightlifting (1) Boxing (1)									
Beta blockers	Reduce anxiety (1) Reduce muscle tremor/ shaking (1) Reduce heart rate (1)	Archery (1) Diving (1)									

Q8.

Question number	Answer AO2 – 2 marks	Mark
	<p>For example:</p> <ul style="list-style-type: none"> Because the heart rate fluctuates/goes up and down (1) to match the work and rest intervals/sets and reps in interval training (1) <p>Accept other appropriate responses</p> <p>1 mark for reason this is interval training (AO2) 1 mark for expansion of why interval training makes heart rate fluctuate in this way (AO2)</p>	(2)

Q9.

Question number	Answer AO1 - 2 marks; AO3 – 1 mark	Mark
	<p>NB Question is about use of tests to monitor a training programme – NOT baseline testing</p> <p>For example:</p> <ul style="list-style-type: none"> Compare with previous results/see progress (1) to check training is working (1) to see if the programme needs changing/targets need revising (1) To see if they are improving (1) so that the individual knows they are training hard enough/not training too hard (1) otherwise the fitness benefits that were expected will not occur. (1) To check for progress (1) if they are meeting targets/making progress this is motivating (1) therefore they are more likely to keep training (1) <p>Accept other appropriate responses.</p> <p>1 mark for stating why we use fitness testing to monitor training, (AO1) 1 mark for appropriate linked expansion of value of this (AO1) 1 mark for impact of this (AO3)</p>	(3)

Q10.

Question number	Answer AO1 – 2 marks	Mark								
(a)	<p>Any two of the following (any order):</p> <table border="1"> <thead> <tr> <th></th> <th>(a) Phase</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Pulse raiser (1)</td> </tr> <tr> <td>2</td> <td>Stretching/Mobilisation (1)</td> </tr> <tr> <td>3</td> <td>Skills practice/drills (1)</td> </tr> </tbody> </table> <p>Accept other appropriate responses.</p>		(a) Phase	1	Pulse raiser (1)	2	Stretching/Mobilisation (1)	3	Skills practice/drills (1)	(2)
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Question number	Answer AO2 – 2 marks	Mark												
(b)	<p>Any two of the following:</p> <table border="1"> <thead> <tr> <th></th> <th>(a) Phase</th> <th>(b) Benefit to performer</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Pulse raiser (1)</td> <td><u>Increase</u> oxygen delivery to working muscles (1)</td> </tr> <tr> <td>2</td> <td>Stretching/mobilisation (1)</td> <td><u>Increase</u> muscle temperature (1) Increase range of movement</td> </tr> <tr> <td>3</td> <td>Skills practice /drills (1)</td> <td>Practice skills/movements used in the game (1)</td> </tr> </tbody> </table> <p>Accept other appropriate responses.</p>		(a) Phase	(b) Benefit to performer	1	Pulse raiser (1)	<u>Increase</u> oxygen delivery to working muscles (1)	2	Stretching/mobilisation (1)	<u>Increase</u> muscle temperature (1) Increase range of movement	3	Skills practice /drills (1)	Practice skills/movements used in the game (1)	(2)
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Q11.

Question number	Answer AO3 - 1 mark	Mark
(a)	<p>1 mark for correct identification of training method</p> <ul style="list-style-type: none"> Fartlek training 	(1)

Question number	Answer AO3 - 1 mark	Mark
(b)	1 mark for correct identification of component of fitness <ul style="list-style-type: none"> • Cardiovascular fitness 	(1)

Question number	Answer AO2 – 2 marks; AO3 – 2 marks	Mark																								
(c) (i)&(ii)	<p>An outline of one week of her training is shown in Table 5.</p> <table border="1"> <thead> <tr> <th>Day of week</th> <th>Activity</th> <th>Length of session</th> </tr> </thead> <tbody> <tr> <td>Sunday</td> <td>Run at varying intensities through woodland</td> <td>60 minutes</td> </tr> <tr> <td>Monday</td> <td>Rest</td> <td></td> </tr> <tr> <td>Tuesday</td> <td>Laps around the park varying her pace, running at 60% – 80% of her maximum heart rate</td> <td>75 minutes</td> </tr> <tr> <td>Wednesday</td> <td>Rest</td> <td></td> </tr> <tr> <td>Thursday</td> <td>Run at varying intensities along the beach</td> <td>60 minutes</td> </tr> <tr> <td>Friday</td> <td>Rest</td> <td></td> </tr> <tr> <td>Saturday</td> <td>X-country race</td> <td></td> </tr> </tbody> </table> <p style="text-align: center;">Table 5</p> <p>For example:</p> <ul style="list-style-type: none"> • Specificity/Type (1) as she is training over different terrains/varying the intensity of her run/working on her CV fitness to match what she needs in cross-country (1) • Thresholds of training/Intensity (1) because she works within her aerobic training zone on Tuesday/works at 60 – 80% MHR (1) <p>Accept other appropriate responses.</p> <p>1 mark for principle of training (AO3) - (max 2) 1 mark for applied justification of principle of training to Table 5 (AO2) (max 2)</p>	Day of week	Activity	Length of session	Sunday	Run at varying intensities through woodland	60 minutes	Monday	Rest		Tuesday	Laps around the park varying her pace, running at 60% – 80% of her maximum heart rate	75 minutes	Wednesday	Rest		Thursday	Run at varying intensities along the beach	60 minutes	Friday	Rest		Saturday	X-country race		(4)
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Q12.

Question number	Answer AO2 - 1 mark	Mark
(a)	<p>1 mark for correct interpretation of image</p> <ul style="list-style-type: none"> • Plyometric • Plyometrics • Plyometric training 	(1)

Question number	Answer AO1 - 1 mark	Mark
(b) (i)	<p>Advantage of plyometric training</p> <p>For example:</p> <ul style="list-style-type: none"> • Can be used to develop power/strength quickly (1) • Requires minimal/no equipment (1) <p>Accept other appropriate responses.</p>	(1)

Question number	Answer AO1 - 1 mark	Mark
(b) (ii)	<p>Disadvantage of plyometric training</p> <p>For example:</p> <ul style="list-style-type: none"> • Can cause injury (1) • Higher risk of injury (1) <p>Accept other appropriate responses.</p>	(1)

Q13.

Qu Num	Indicative content (A01 – 3 marks; A02 - 3 marks for application; A03 - 3 marks for evaluation)	
	<p>Reward acceptable answers. Responses may include, but are not limited to, the following:</p> <p>Knowledge and understanding of adaptations due to training (A01).</p> <ul style="list-style-type: none"> • bone density will increase with resistance/weight bearing training • decreased resting heart rate will be from aerobic/continuous training • muscle hypertrophy will result from weight training <p>Application of knowledge, linking the training effect to shot put. (A02)</p> <ul style="list-style-type: none"> • increased bone density means the bones in Dan's wrist will become stronger, (AO2) • increased bone density means Dan is less likely to miss training due to injury/reduced risk of reversibility/loss of training due to injury (AO2) • decreased resting heart rate means that Dan is increasing his cardiovascular fitness (AO2) • decreased resting heart rate means that Dan would decrease the time he needs to recover/return to resting heart rate quicker (AO2) • muscle hypertrophy means Dan will be able to apply more force to the shot (AO2) • muscle hypertrophy means greater muscle mass therefore Dan will have more strength/power to throw the shot (AO2) 	

	<p>Evaluation of topic – making reasoned judgments about the importance of these adaptations on shot put performance. (A03)</p> <ul style="list-style-type: none"> • bone density will increase with resistance/weight bearing training (AO1) this means the bones in Dan's wrist will become stronger (AO2) this means that he can practice the technique of shot put many times in a session giving him the practice he needs to improve his technique (AO3) • decreased resting heart rate will be from aerobic/continuous training (AO1) this means that Dan is increasing his cardiovascular fitness (AO2). Whilst this may be helpful to Dan to improve his general fitness this will have limited impact on his shot put performance as he needs explosive strength/it is an anaerobic event/it is a short term event (AO3) • muscle hypertrophy will result from weight training (AO1) this means Dan will be able to apply more force when throwing the shot (AO2) therefore this type of training is critical to make sure Dan has the required muscular force/strength/power to get the shot a long enough distance to perform well (AO3) <p>Students who only show achievement against A01 will not be able to gain marks beyond level 1.</p>	(9)
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Level	Mark	Descriptor
	0	No rewardable material
1	1-3	<ul style="list-style-type: none"> • Demonstrates isolated elements of knowledge and understanding, with limited technical language used (AO1). • Limited attempt to apply knowledge to question context (AO2). • Generic assertions may be presented (AO3 - evaluation).
2	4-6	<ul style="list-style-type: none"> • Demonstrates mostly accurate knowledge and understanding, including appropriate use of technical language in places (AO1). • Applied knowledge to question context (AO2). • Attempts at drawing conclusions, with some support from relevant evidence (AO3 - evaluation).
3	7-9	<ul style="list-style-type: none"> • Demonstrates accurate knowledge and understanding throughout, including appropriate use of technical language (AO1). • Applied detailed knowledge to question context throughout (AO2). • Reaches valid and well-reasoned conclusions supported by relevant evidence (AO3 - evaluation).