

**Friday 11 January 2019 – Afternoon**

**LEVEL 1/2 CAMBRIDGE NATIONAL IN SPORT SCIENCE**

**R041/01** Reducing the risk of sports injuries

Candidates answer on the Question Paper.

**OCR supplied materials:**

None

**Other materials required:**

None

**Duration:** 1 hour



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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### INSTRUCTIONS TO CANDIDATES

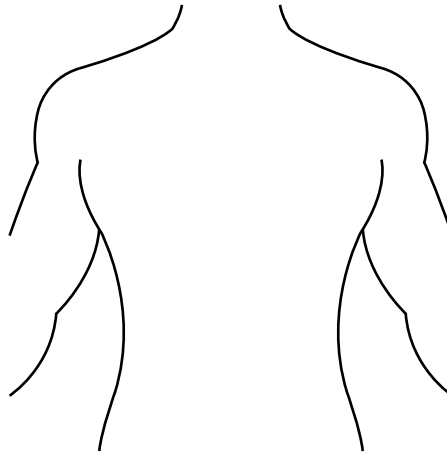
- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined page(s) at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the barcodes.

### INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [ ] at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The quality of your written communication will be assessed in your answer to the question marked with an asterisk (\*).
- This document consists of **12** pages. Any blank pages are indicated.

Answer **all** the questions.

1 Poor posture can result in different sports injuries.



(a) On the diagram above, draw the shape of the spine of someone who has severe scoliosis. [1]

(b) Explain the difference between lordosis and kyphosis.

.....  
.....  
.....  
.....  
.....  
..... [2]

(c) Describe **two** ways in which pelvic tilt might increase the risk of injury in sport.

1 .....  
.....  
2 .....  
..... [2]

(d) Identify **one** sports injury related to poor posture other than scoliosis, lordosis, kyphosis and pelvic tilt.

..... [1]

2 Sports injuries can occur in many sports and in different ways.

Name the most likely type of sports injury for each of the following scenarios:

(a) A footballer with a bone sticking out of their leg as a result of a tackle.  
..... [1]

(b) A hockey player wearing trainers that are too small.  
..... [1]

(c) A cyclist who has fallen off their bike and has purple coloured discolouration on their legs and elbows.  
..... [1]

(d) A golfer who repeatedly puts stress on their arms during six months of practice.  
..... [1]

3 A cool down has many physical benefits that help the body's transition back to a resting state, such as gradual lowering of breathing and heart rate.

Describe **three** other physical benefits of a cool down.

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.....  
.....  
.....  
.....  
..... [3]

4 SALTAPS is an acronym for an on-field assessment routine.

(a) Identify the **two** different words represented by the two letter A's in SALTAPS.

1 .....

2 .....

[2]

(b) Describe what happens at each of these 'letter A' stages of SALTAPS.

.....

.....

.....

..... [2]

5 Which one of the following is an individual variable that can influence the risk of injury when playing sport?

(circle your chosen option to indicate your answer)

(a) Clothing

(b) Contact sports

(c) Playing surface

(d) Nutrition

[1]

- 6 A hockey player who warms up before a game will reduce their chances of injury as they will be focused and able to concentrate more during the game.

Using practical examples, explain **three** other psychological reasons for warming up and how these might reduce the risk of injury.

1 .....  
.....  
.....  
..... [2]

2 .....  
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..... [2]

3 .....  
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..... [2]

7 The table below contains some information gathered by a rugby coach as part of their risk assessment before delivering their first rugby training session.

Number/Gender of participants:	22 male and 28 female
Age range:	12–22
Fitness levels:	Medium
Experience:	All have played tag rugby before but no contact
Equipment:	50 Rugby balls
Venue:	One dry rugby pitch
Weather:	Hot and sunny
Additional information:	One participant diagnosed with epilepsy One participant recently recovering from a fractured leg

**Table 1 – Information gathered as part of a rugby risk assessment**

(a) Explain the main purpose of a risk assessment.

.....  
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..... [3]

(b) Using the information in Table 1, identify **three** different individual variables which can influence the risk of injury to the rugby players.

1 .....  
2 .....  
3 ..... [3]

(c) Other than the extrinsic factors in Table 1, identify **two** other extrinsic factors that could cause injury to the rugby players.

1 .....  
2 ..... [2]

(d) Using the information in Table 1, identify **one** specific need the coach should consider before starting the warm up.

..... [1]

8 (a) What is meant by the term ‘compression’ when applied to the treatment of a sports injury?

..... [1]

(b) Name an acute sports injury that can be treated with compression.

..... [1]

(c) Name a piece of first aid equipment that can be used to compress an injury.

..... [1]

(d) Name the treatment when a physiotherapist uses their hands to help circulate blood and reduce tension around a pulled muscle.

..... [1]

9 Name a chronic sports injury that a long distance runner may experience during their training for a marathon and describe one cause of this injury.

Name of chronic sports injury:

..... [1]

Cause:

..... [1]

10 (a) Complete the following table showing medical conditions and symptoms.

Medical condition	Symptoms
Epilepsy	Fits and seizures Muscle spasms (i) ..... (ii) .....
(iii) .....	Increased thirst Weight loss Tiredness

[3]

(b) What treatment should be given to an individual with hypoglycaemia?

..... [1]

- 11 Using the table below, identify the most appropriate warm up component and a suitable exercise for each of the joints and the heart.

Part of the body	Warm up component	Exercise example
Joints		
Heart		

[4]

- 12 Which one of the following is **not** a characteristic of a group of players a coach needs to consider before delivering a warm up?  
(circle your chosen option to indicate your answer)

- (a) Fitness levels
- (b) Medical conditions
- (c) Environmental conditions
- (d) Experience levels

[1]

- 13 Circle the correct answer for each of the following statements:

- (a) Cramp is caused by having a lack of sugar in the body that causes pain and the muscles to tighten.

True      False

[1]

- (b) The skill rehearsal phase is an important component of the cool down as it allows performers to rehearse common movement patterns and skills.

True      False

[1]



14 Maintenance stretching can be used as a component of a cool down.

Identify the most common type of stretch that is used in a cool down and give an example which focuses on the legs.

Type of stretch:

.....

Example:

.....

[2]

**15\*** It is important that sports coaches recognise symptoms of common medical conditions and have Emergency Action Plans (EAP) in place to be able to respond to these conditions.

Describe the symptoms a sports coach would need to recognise in a performer who was having an asthma attack.

Describe the **three** components of an Emergency Action Plan (EAP) and explain how it can be used in response to a performer having an asthma attack.

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..... [8]

END OF QUESTION PAPER

**ADDITIONAL ANSWER SPACE**

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

A large area of lined paper for writing. It consists of a vertical solid line on the left side, creating a margin. To the right of this line, there are numerous horizontal dotted lines spaced evenly down the page, providing a guide for handwriting.

A large rectangular area with a solid vertical line on the left side and horizontal dotted lines extending across the page, providing a space for writing answers.



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