



ZIMBABWE SCHOOL EXAMINATIONS COUNCIL

General Certificate of Education Advanced Level

SPORT SCIENCE & TECHNOLOGY

6080/1

PAPER 1

SPECIMEN PAPER

2 hours 30 minutes

TIME: 2 hours 30 minutes

INSTRUCTIONS TO CANDIDATES

Write your name, centre number and candidate number in the spaces provided on the answer paper/answer booklet.

Answer **all** questions in Section A and any **five** from Section B.
Start Section B on a new sheet of answer paper.

If you use more than one sheet of paper, fasten the sheets together.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets [] at the end of each question or part question.

You are reminded of the need for good English and clear presentation in your answers.
Calculations may be used.

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[Turn over

Section A

Answer **all** questions in this section. Each question carries 8 marks. Candidates are advised to spend not more than **one hour** in this section.

- 1** From the list below, choose **one** word that describes synovial joints movements. Plantar Flexion, Supination, Flexion, Abduction, Extension, Rotation, Adduction, Circumduction.

	Description	Movement
(a)	Palm moves to face backwards	
(b)	Moving a body part so that it follows a circular motion	
(c)	Moving a body part away from the midline	
(d)	Straightening parts at a joint	
(e)	Walking on tiptoes.	
(f)	Moving a body part towards the midline.	
(g)	Moving a body part around an axis	
(h)	Bending body part at a joint.	

[8]

[Total 8]

- 2** (a) Describe the 3rd Newton's law of motion giving a sport specific example of its application? [4]

- (b) Explain the factors that contribute to the reduction of the "tugging" effect of air resistance in any two sporting disciplines? [4]

[Total: 8]

- 3** (a) What is carbohydrate loading? [2]

- (b) Explain the importance of carbohydrate loading to an athlete. [6]

[Total 8]

- 4** **(a)** Define the following terms:
- (i)** Systolic pressure, [1]
- (ii)** Diastolic pressure. [1]
- (b)** If an athlete suddenly stops performing strenuous exercise, their blood pressure drops dramatically. Explain the cause of this sudden drop in blood pressure? [6]
- [Total: 8]
- 5** **(a)** Define *sports technology*. [1]
- (b)** Describe how sport technology is being applied in any four aspects or areas of sport to improve performance. [4]
- (c)** Identify **three** disadvantages of using technology in sports. [3]
- [Total 8]

Section B

Answer any **five** questions in this section. Each question carries 12 marks.

- 6** Analyse the skeletal muscle, highlighting its constituent features and functions during exercise. [12]
- 7**
- (a) What are the effects of lactic acid build up in a muscle? [3]
 - (b) State the causes of delayed onset muscle soreness? [3]
 - (c) What are the ways of preventing delayed onset muscle soreness? [3]
 - (d) Explain the effects of warm up on body systems. [3]
- [Total: 12]
- 8**
- (a) Describe the role of Adenosine triphosphate (ATP) in the processes of muscle contraction. [5]
 - (b) Describe the kerb cycle. [4]
 - (c) Calculate the maximum heart rate for the following:
 - (i) 65 year old
 - (ii) 45 year old
 - (iii) 30 year old
- [3]
[Total: 12]
- 9** What are the effects of aerobic and anaerobic training? [Total: 12]
- 10** In any sport of your choice, what are the factors affecting fitness. [Total: 12]
- 11**
- (a) State and explain nutritional elements that are important in an athlete's diet. [4]
 - (b) Explain the role of enzymes in digestion. [4]
 - (c) Outline any **four** functions of water in the human body. [4]
- [Total: 12]
- 12** Motivation is a key component in learning and performance of motor skills in sports. Discuss the theory of achievement. [Total:12]
- 13** Analyse Newton's laws of motion using concrete examples in sports. [Total: 12]
- 14** Discuss trait perspective behaviour in sport. [Total: 12]
- 15** Analyse the effects of media in sports. [Total: 12]