

CAMBRIDGE TECHNICALS LEVEL 2 (2016)

Examiners' report

SPORT AND PHYSICAL ACTIVITY

05889, 05885, 05886

Unit 1 Summer 2022 series

Contents

Introduction	4
Unit 1 series overview	5
General comments on the paper	6
Learning outcome 1: questions 1 - 16	6
Learning outcome 2: questions 17 - 28	6
Learning outcome 3: questions 29 - 34	6
Learning outcome 4: questions 35 - 40	7
Appendix 1 Questions	8
Question 1	8
Question 2	9
Question 3	10
Question 4	11
Question 5	12
Question 6	12
Question 7	13
Question 8	13
Question 9	14
Question 10	14
Question 11	15
Question 12	15
Question 13	16
Question 14	17
Question 15	18
Question 16	19
Question 17	19
Question 18	20
Question 19	20
Question 20	21
Question 21	21
Question 22	22
Question 23	23
Question 24	24
Question 25	25
Question 26	26

Question 27	26
Question 28	27
Question 29	27
Question 30	28
Question 31	29
Question 32	30
Question 33	31
Question 34	32
Question 35	33
Question 36	33
Question 37	34
Question 38	35
Question 39	36
Question 40	37
Copyright information	37

Introduction

Our examiners' reports are produced to offer constructive feedback on candidates' performance in the examinations. They provide useful guidance for future candidates.

The reports will include a general commentary on candidates' performance, identify technical aspects examined in the questions and highlight good performance and where performance could be improved. The reports will also explain aspects which caused difficulty and why the difficulties arose, whether through a lack of knowledge, poor examination technique, or any other identifiable and explainable reason.

Where overall performance on a question/question part was considered good, with no particular areas to highlight, these questions have not been included in the report.

A full copy of the question paper is attached as an Appendix and the mark scheme can be downloaded from OCR.

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Unit 1 series overview

This was the eighth series of assessment for this unit. The unit contains a large breadth of knowledge and, as is to be expected, candidates performed better on some Learning Objectives (LOs) than others with performance on LO1 giving the highest overall outcome, while performance on LO2 was least successful.

		Candidates who did less well on this paper generally did the following:		
•	performed well across each of the four learning objectives.	•	had gaps in their knowledge in relation to individual Learning Objectives or across the unit specification content.	

General comments on the paper

The majority of the candidates achieved marks between 19 and 28 out of the 40 marks available. The lowest mark point was 8 and the highest mark point was 36.

Learning outcome 1: questions 1 - 16

This LO covers core anatomy and the physiology of the musculo-skeleton. The candidates performed well on Questions 5, 6, 14 and 15 – particularly Question 15 (which required the identification of muscles in the back). The questions candidates found most difficult within this section were Question 10 (muscular benefits of playing sport) and Question 4 (naming the type of joint within the pelvic girdle), with only a minority of candidates getting these questions correct.

Assessment for learning



Students should be encouraged to practice the skill of naming specific parts of a diagram, as this style of question often features in the exam.

Learning outcome 2: questions 17 - 28

This LO covers the cardio-vascular and respiratory systems. This LO contains content of a technical nature and terminology where component names and functions can be easily confused, and performance within this section suggests that candidates continue to struggle, as this was the lowest scoring LO on the exam.

Questions 25, 26 and 27 were the best answered in this LO, but still most candidates failed to answer them correctly. Question 19 had the lowest outcomes on the exam (about a blood vessel). Candidates also found the rest of the Questions in this LO guite demanding.

Assessment for learning



This LO has historically seen some of the lowest correct response rates. It is important that candidates are familiar with this part of the specification.

Learning outcome 3: questions 29 - 34

This LO relates to health measurements such as BMI, blood pressure and body fat and the candidates need to know normative data and standard values and classifications for some of these elements of the section in order to answer the questions.

This was the second least successfully answered section within the examination. Performance was least successful on Question 29 (related to the definition of lung capacity). Questions 30 and 31 (interpretation of body fat data) performed best within this section of the exam with the majority of candidates selecting the correct response on each of these two questions

Learning outcome 4: questions 35 - 40

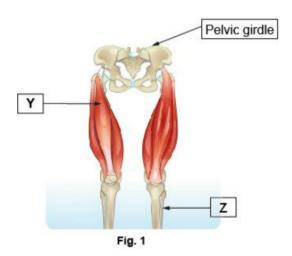
LO4 is about the trends in participation within sport and physical activity. The candidates do not need to know or to be able to recall statistics themselves (in contrast to LO3) as this data can vary significantly over time and as between sources. With this in mind, the relevant information is provided within the test and the candidates have to be able to correctly respond to the stimulus data which is provided.

Question 40 was the least well performing question within this section and it related to the activity levels of children with or without a disability. By contrast, the majority of candidates successfully answered Question 37 (simply relating to the interpretation graphical data). Overall, the candidates performed quite successfully on this section of the question paper.

Appendix 1 Questions

Question 1

On Fig. 1, name the muscle labelled Y.



Α	Abdominals

В	Femur

С	Hamstrings

D	Quadriceps

8

On Fig. 1, name the bone that fits into the pelvic girdle.

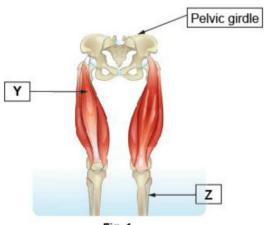


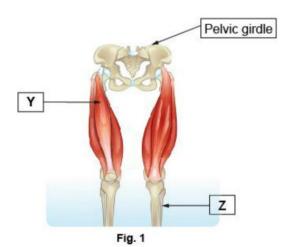
Fig. 1

Α	Femur
_	
В	Fibula
С	Humerus
D	Tibia

[1]

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On Fig. 1, name the bone labelled Z.



Α	Femur

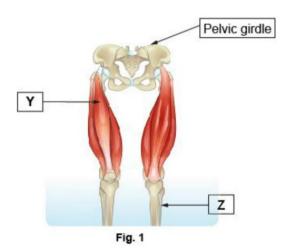
В	Fibula

С	Patella

D	Tibia			

10

On Fig. 1, name the type of joint at the pelvic girdle.



- A Ball and socket
- B Hinge
- C Hip
- D Rotation

11

Wh	ich of the following bones is not located at the elbow joint?
Α	Humerus
В	Patella
С	Radius
D	Ulna

[1]

Question 6

vvna	at is the main purpose of the cranium?
A	Blood production
В	Movement
С	Protection
D	Support

12

WI	hat connective tissue attaches muscle to bone?
А	Cartilage
В	Ligaments
С	Synovial fluid
D	Tendons

[1]

Question 8

D

Storage of minerals

What is the main purpose of synovial fluid?

A Joins bone together

B Maintain joint stability

C Prevent friction

13

VVII	ilett one of the following is a positive physiological effect of sport and physical activity of the skeletoff?
Α	Decreased bone density
В	Increased bone density
С	Increased hypertrophy
D	Increased risk of osteoporosis

[1]

Question 10

Which one of the following is a muscular health benefit from playing regular sport?

- A Decreased mobility
- B Improved flexibility
- C Improved metabolic rate
- D Less chance of osteoarthritis

14

^A	Condyloid	
3 [Gliding	
;	Hinge	
] (Saddle	
l		
Vh	ich one of the following movement types best describes a twisting movement that takes place at the hips ing a golf swing?	
Vh	ich one of the following movement types best describes a twisting movement that takes place at the hips	
Vh	ich one of the following movement types best describes a twisting movement that takes place at the hips ing a golf swing?	

15

Wh	ich one of the following is a function of the skeleton?
Α	Production of calcium
В	Production of glycogen
С	Storage of lactic acid
D	Storage of minerals

16

On Fig. 2, label Y shows the:

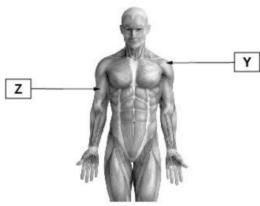


Fig. 2

Α	Abdominals

В	Bicep	

С	Deltoid

D	Tricep

On Fig. 2, label Z shows the:

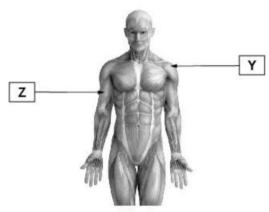


Fig. 2

Α	Abdominals

B Bicep

C Pectorals

D Tricep

18

A I	ncrease in coordination
В	ncrease in fatigue
C	ncrease in flexibility
D	ncrease in speed

Question 17

what part of the heart receives deoxygenated blood from the vena cava?		
Α	Arteries	
В	Atria	
С	Veins	
D	Ventricles	

19

Capillaries

Veins

D

Wh	nat part of the heart pumps deoxygenated blood to the lungs and oxygenated blood to the rest of the body?	
Α	Aorta]
В	Arteries]
С	Atria	
D	Ventricles	
		[1]
Que	stion 19	
Wh	nich blood vessel has the largest lumen?	
Α	Aorta	
В	Arteries	

20

What is the correct passage of blood flow through the heart from the vena cava to the lungs?		
Α	Atria to ventricles to pulmonary artery	
В	Atria to ventricles to pulmonary vein	
С	Ventricles to atria to pulmonary artery	
D	Ventricles to atria to pulmonary vein	
		[1]

Question 21

Which blood vessels carry blood under the lowest pressure?

A Arteries

B Capillaries

C Red blood cells

D Veins

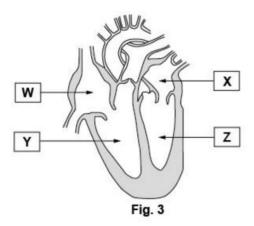
21

Which of the following are all components of blood?		
Α	Red cells, platelets and lactic acid	
В	White and red cells and glycogen	
С	White and yellow cells and plasma	
D	White cells, plasma and platelets	

22

Fig. 3 shows a picture of the heart.

On Fig. 3, name the part of the heart labelled Y and Z.

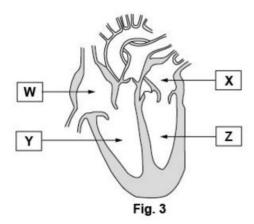


Α	Arteries
В	Atria
С	Valves
D	Ventricles

23

Fig. 3 shows a picture of the heart.

On Fig. 3, what parts of the heart contain deoxygenated blood?

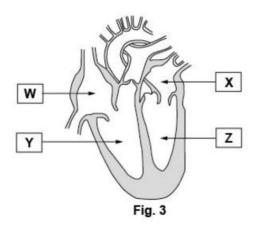


Α	W and X
В	W and Y
С	X and Z
D	Y and Z

24

Fig. 3 shows a picture of the heart.

On Fig. 3, what controls the blood flow between X and Z?



Α	Cartilage
В	Intercostals
С	Septum
D	Valves

What happens to the number of capillaries after playing sport for a few months?		
Α	Decreases	
В	Increases	
С	Increases and decreases	
D	Remains the same	

[1]

Question 27

Which one of the following is located within the lungs?

A Bronchi

B Epiglottis

C Pharynx

D Trachea

26

What is the diaphragm made of?		
Α	Air sacs of alveoli	
В	Layer of cartilage	
С	Sheet of muscle	
D	Synovial fluid	

[1]

Question 29

A The amount of air that can be breathed out

B The amount of air your lungs can hold

C The amount of breaths taken in one minute

D The amount of oxygen your lungs can hold

27

How is BMI measured?		
Α	Using a calculation involving weight and height	
В	Using a peak flow test	
С	Using a sphygmomanometer	
D	Using a stethoscope	

28

Using Table 1 BMI, who is classed as underweight?

Name	Gender	ВМІ	Body fat percentage
Kofi	Male	18	15
Sundip	Female	24	30
Jack	Male	41	29
Jane	Female	19	28

Table 1

Α	Jack
В	Jane
С	Kofi
D	Sundip

Using Table 1 BMI, which two people are not a healthy weight?

Name	Gender	ВМІ	Body fat percentage		
Kofi	Male	18	15		
Sundip	Female	24	30		
Jack	Male	41	29		
Jane	Female	19	28		

Table 1

Α	Jack and Kofi
В	Kofi and Jane
С	Kofi and Sundip
D	Sundip and Jane

30

Using **Table 1**, who is classed as an obese body fat percentage?

Name	Gender	ВМІ	Body fat percentage		
Kofi	Male	18	15		
Sundip	Female	24	30		
Jack	Male	41	29		
Jane	Female	19	28		

Table 1

Α	Jack
В	
D	Jane
С	Kofi
·	
D	Sundip

31

Using Table 1, which two people have an acceptable body fat percentage?

Name	Gender	ВМІ	Body fat percentage		
Kofi	Male	18	15		
Sundip	Female	24	30		
Jack	Male	41	29		
Jane	Female	19	28		

Table 1

A	Jack and Sundip
В	Kofi and Jane
С	Kofi and Sundip
D	Sundip and Jane

32

Wh	ich one of the following is a barrier to regular participation in sport and physical activity?	
Α	Being a single parent	
В	Good health and well being	
С	High income	
D	Provision of activities at work	
		[1]
ues	stion 36	

Qι

Which one of the following is **not** an example of specialised activity programming?

Α	Half price gym fees for new members

В Mother and toddler get active sessions

С Over 50s ladies aqua aerobics

D Wheelchair rugby coaching

33

Licina Eia	1 what	norcontago o	fohildron	do loca	than an	avorage (of 20	minutos	physical	activity a	daya
Usina Fia.	4. What	percentage o	t chilaren	do less	than an	i averade (30	minutes	privsical	activity a	gav?

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Α	04.0
	24.2

- B 29.0
- C 46.8
- D 71

34

Lleina E	ia /	how many	children and	VOLING DOODLO	are meeting the	quidalinas	for taking part in	physical	activity?
USING F	14. 4	r, HOW IIIally	Cillidie ii aliu	young people	are meeting the	guidelliles	ioi taking part in	priysical	activity:

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Α	1.7 million

- B 2.1 million
- C 3.3 million
- D None

35

Using **Fig. 5**, what percentage of children and young people with a disability or long-term health condition in Years 7-11 are likely to be less active?

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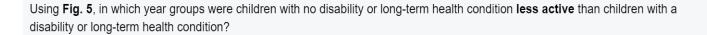
A 17%

B 22%

C 31%

D 34%

36





Α	Years 1–2					
---	-----------	--	--	--	--	--

- B Years 3–6
- C Years 7–11
- D None of the year groups

[1]

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