

CAMBRIDGE TECHNICALS LEVEL 2 (2016)

Examiners' report



SPORT AND PHYSICAL ACTIVITY

05889, 05885, 05886

Unit 1 January 2020 series

Version 1

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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.

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Unit 1 series overview

General comments on the paper

There was an increase in entry for this Unit 1 test in January 2020 (139 candidates) compared to June 2019 (88 candidates). The performance in this series was the highest seen yet, in this fifth series of assessment, with a mean mark almost three marks higher than that seen in June 2019. As in previous series, the breadth of knowledge to be covered meant that some Learning Outcomes (LOs) seemed clearly to be better known than others. Based on statistical data for all the items in the test, LO4 was where candidates on average scored best in terms of proportion of marks gained from those available. Candidates performed slightly better on LO1 than on LO3 while LO2 was the area where candidates found marks hardest to access, with the average just over half marks for these items (17-28).

Learning outcome 1: questions 1 - 16

This LO covers core anatomy and physiology of the musculo-skeletal system. Given its nature and weighting within the unit, it seems reasonable to assume that this was covered reasonably well and given some focus in many centres, with an average mark of 11/16 (69.38%) for this section, the best performance for this LO to date.

The vast majority of candidates got the correct answer on items 2, 10, 13 and 14; items 3, 8, 15 and 16 proved more challenging.

Learning outcome 2: questions 17 - 28

LO2 covers the cardio-vascular and respiratory systems; scores were significantly lower on this compared to the other LOs, with an average of 6.1/12 (51%), and this continues to be the LO that candidates do least well on each series. This may be due to the technical nature of some of the content and terminology, where it is easy to confuse different component names and functions, and candidates may begin the course with less factual knowledge than would be the case with bones and muscle groups.

Learners did well on items 18, 23 and 24 but found 17, 19, 21, 22 and 28 particularly challenging.

Learning outcome 3: questions 29 - 34

LO3 relates to health measurements such as BMI, blood pressure, body fat, and candidates need to know normative data and standard values and classifications for some of those in order to answer the questions.

Scores on this LO were reasonably strong and slightly higher than in June 2019, with over half marks the average 3.7/6 (61.7%), and a good number scoring four marks or more.

Candidates did particularly well on item 33; items 31 and 34 proved challenging.

Learning outcome 4: questions 35 - 40

LO4 is about trends in participation but unlike LO3 candidates do not need to know/recall statistics themselves as they can vary significantly between sources and over time, so information is provided in the test and they need to respond to questions linked to this.

This was the best answered LO this series with an average mark of 4.5/6 (76%) slightly higher than in June 2019.

Candidates did well across all questions in this section, particularly in Question 36, although Question 37 proved challenging.

Appendix 1 Questions

Question 1

The sternum is found in the:

- A
- B
- C
- D

[1]

Question 2

Which one of the following is found in the back?

- A
- B
- C
- D

[1]

Question 3

Which of the following are both examples of a hinge joint?

- A
- B
- C
- D

[1]

Question 4

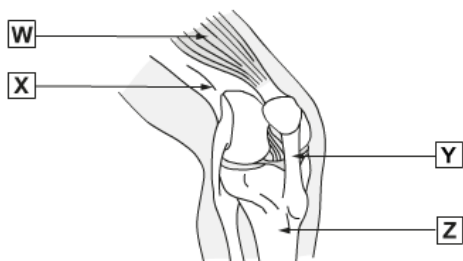


Fig. 1

The muscle labelled **W** on **Fig. 1** is the:

- A
- B
- C
- D

[1]

Question 5

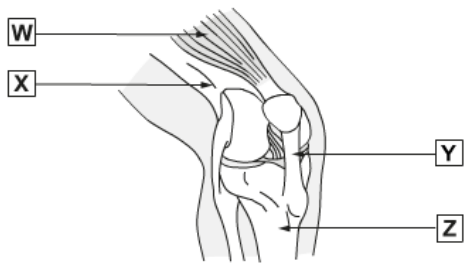


Fig. 1

The bone labelled X on Fig. 1 is the:

A Femur

B Tibia

C Patella

D Fibula

[1]

Question 6

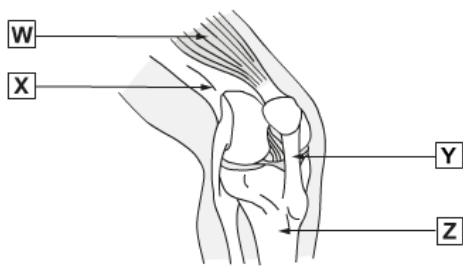


Fig. 1

The part of the knee joint labelled Y on Fig. 1 is:

A Cartilage

B Tendon

C Ligament

D Muscle

[1]

Question 7

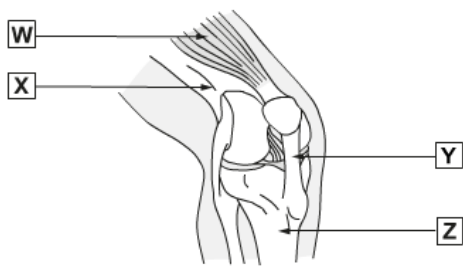


Fig. 1

The bone labelled Z on Fig. 1 is the:

- A
- B
- C
- D

[1]

Question 8

Which of the following acts as a shock absorber in the knee when landing after a jump?

- A
- B
- C
- D

[1]

Question 9

What are the symptoms of osteoarthritis?

A Tendon pain and stiffness

B Muscle pain and stiffness

C Ligament pain and stiffness

D Joint pain and stiffness

[1]

Question 10

What happens to the angle of a joint when it is being extended?

A Decreases

B Increases

C Moves in a circular motion

D Remains stationary

[1]

Question 11

Which one of the following is a function of the skeleton?

- A Storage of glycogen
- B Storage of lactic acid
- C Storage of red blood cells
- D Storage of minerals

[1]

Question 12

Where is glycogen stored as a source of energy?

- A Muscles
- B Bones
- C Joint capsule
- D Cartilage

[1]

Question 13

A positive musculoskeletal effect of regular physical activity is to have an increase in power. What is meant by the term power?

- A The ability to move the body quickly
- B A combination of speed and changing direction
- C The ability to keep going without any rest
- D A combination of strength and speed

[1]

Question 14

What term is used when muscles increase in size after taking part in regular physical activity?

- A Hyper-extended
- B Dislocated
- C Hypertrophy
- D Atrophy

[1]

Question 15

Which one of the following provides attachment for intercostal muscles?

- A Tarsals
- B Scapula
- C Ulna
- D Ribs

[1]

Question 16

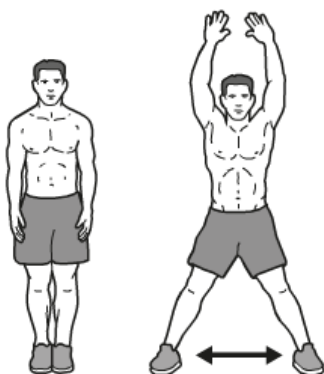


Fig. 2

Name the movement at the shoulder joint that the performer in Fig. 2 has performed.

- A Flexion
- B Extension
- C Abduction
- D Adduction

[1]

Question 17

Which one of the following is false for ventricles?

- A They are located at the bottom of the heart
- B The tricuspid valve separates the right ventricle from the right atrium
- C The semilunar valve separates the left atrium from the left ventricle
- D The right ventricle receives deoxygenated blood

[1]

Question 18

Which of the following is **not** part of the cardiac system?

- A Aorta
- B Bronchi
- C Vena cava
- D Pulmonary vein

[1]

Question 19

When blood enters the aorta it has come from the:

A Vena cava

B Lungs

C Left ventricle

D Working muscles

[1]

Question 20

When blood travels at high pressure it is being transported by the:

A Arteries

B Veins

C Capillaries

D Intercostals

[1]

Question 21

Which of the following is true for the cardiac system?

- A Acts as a glycogen store
- B Maintains posture
- C Responsible for core strength
- D Fights infection and disease

[1]

Question 22

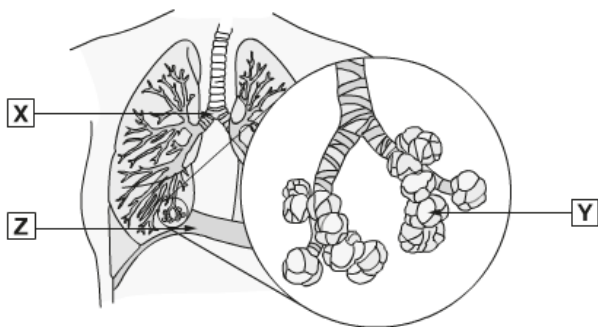
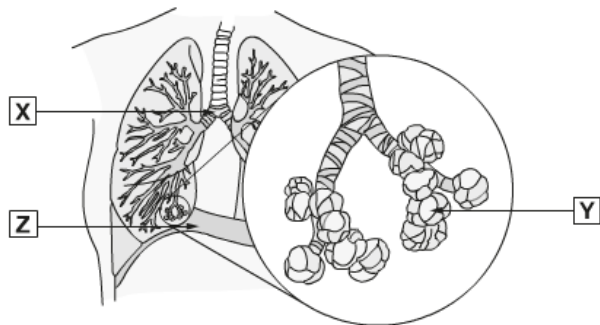


Fig. 3

On Fig. 3, the part of the respiratory system labelled X is the:

- A Epiglottis
- B Bronchus
- C Bronchioles
- D Larynx

[1]**Question 23****Fig. 3**

On Fig. 3, the part of the respiratory system labelled Y is the:

- A
- B
- C
- D

[1]

Question 24

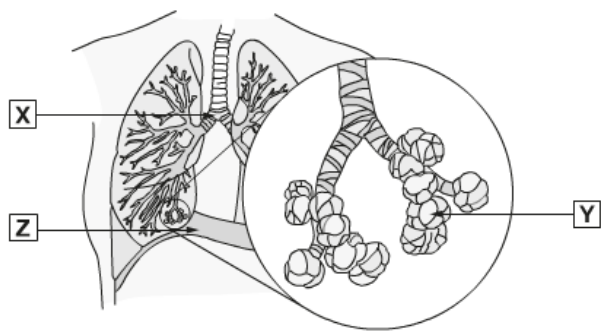


Fig. 3

On Fig. 3, the part of the respiratory system labelled Z is the:

A Nasal cavity

B Larynx

C Diaphragm

D Intercostals

[1]

Question 25

Which of the following is a component of the respiratory system?

A Intercostal muscle

B Deltoid

C Aorta

D Plasma

[1]

Question 26

How is an increased VO₂ max a benefit for a performer in sport?

A They have an improved metabolic rate

B They are able to prevent the build-up of lactic acid in the muscles

C Their ability to expel carbon dioxide becomes less efficient

D Their ability to inspire and use oxygen per minute increases

[1]

Question 27

Which one of the following is a long term effect of sport on the cardiac system?

A Raises blood pressure

B Decrease in cardiac output

C Lower resting heart rate

D Increases atherosclerosis

[1]

Question 28

When the intercostal muscles relax this allows:

A Carbon dioxide to be expelled

B Oxygen to be taken in

C The diaphragm to flatten

D The rib cage to move up and out

[1]

Question 29

Which one of the following is required when taking a BMI measurement?

- A Sex
- B Blood pressure
- C Body fat percentage
- D VO2 Max

[1]

Question 30

A person with a BMI measurement of 18 is classed as being:

- A Very obese
- B Overweight
- C Healthy weight
- D Underweight

[1]

Question 31

	Men	Women
Fit	14-17%	14-17%
Acceptable	18-25%	18-25%
Obese	>25%	>25%

Table 1

Table 1 shows the body fat percentages for men and women.

Which of the following measurements in **Table 1** is incorrect?

- A
- B
- C
- D

[1]

Question 32

	Men	Women
Fit	14-17%	14-17%
Acceptable	18-25%	18-25%
Obese	>25%	>25%

Table 1

Table 1 shows the body fat percentages for men and women.

Using Table 1, Brian has a body fat percentage of 25%. What is he classed as?

- A
- B
- C
- D

[1]

Question 33

	Men	Women
Fit	14-17%	14-17%
Acceptable	18-25%	18-25%
Obese	>25%	>25%

Table 1

Table 1 shows the body fat percentages for men and women.

Using Table 1, Paul has a body fat percentage of 15%. What is he classed as?

- A Fit
- B Acceptable
- C Obese
- D Unable to say

[1]

Question 34

A female has a blood pressure reading of 90/50. What is this reading classed as?

- A Low
- B Ideal
- C Normal
- D High

[1]

Question 35

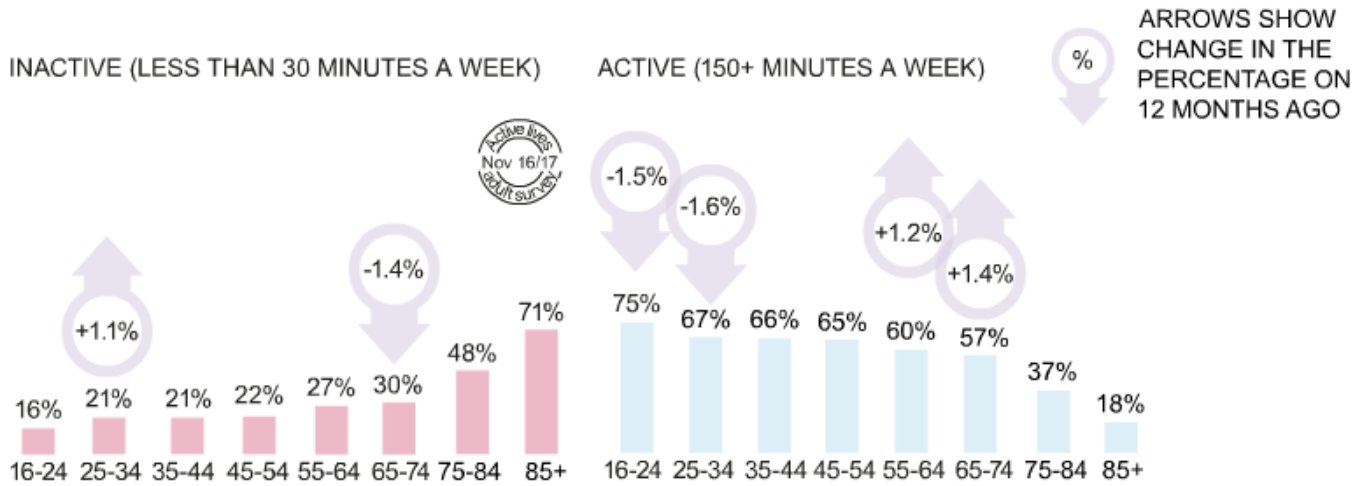


Fig. 4

Using Fig. 4, which age range has the largest percentage of inactivity?

- A
- B
- C
- D

[1]

Question 36

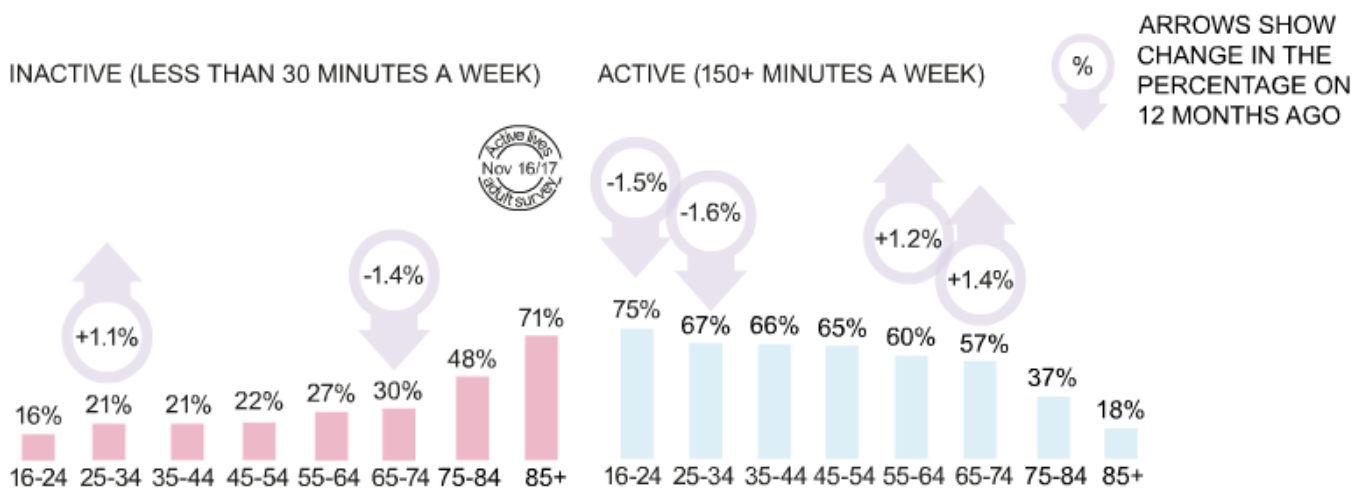


Fig. 4

Using Fig. 4, which age range is the most active?

- A
- B
- C
- D

[1]

Question 37

Which one of the following can help visually impaired people access physical activity?

- A Ramps
- B Braille
- C Hearing loops
- D Hoists

[1]

Question 38

FIT Leisure Centre Timetable – Sports Hall		
Times:	Saturday	Sunday
8 am – 10 am	Children's active play	Children's active play
10 am – 12 noon	Total Fitness for Women	Circuit training for young adults
12 noon – 2 pm	Wheelchair basketball	Total Fitness for Women
2 pm – 4 pm	Circuit training for young adults	Total Fitness for Women
4 pm – 6 pm	Total Fitness for Women	Getting active for the over 50s
6 pm – 8 pm	Men's 5-a-side football league competition	Men's 5-a-side football league competition

Fig. 5

Fig. 5 shows a weekend timetable for a local leisure centre.

Using Fig. 5, which one of the following statements is false?

- A
- B
- C
- D

[1]

Question 39

FIT Leisure Centre Timetable – Sports Hall		
Times:	Saturday	Sunday
8 am – 10 am	Children's active play	Children's active play
10 am – 12 noon	Total Fitness for Women	Circuit training for young adults
12 noon – 2 pm	Wheelchair basketball	Total Fitness for Women
2 pm – 4 pm	Circuit training for young adults	Total Fitness for Women
4 pm – 6 pm	Total Fitness for Women	Getting active for the over 50s
6 pm – 8 pm	Men's 5-a-side football league competition	Men's 5-a-side football league competition

Fig. 5

Fig. 5 shows a weekend timetable for a local leisure centre.

Using Fig. 5, which group has the smallest amount of provision specifically for them?

- A
- B
- C
- D

[1]

Question 40

A fit and single person has just moved to a new area to start a new job. Which of the following barriers is most likely to prevent them from taking part in sport and physical activity?

A Gender

B Injury

C Family commitments

D Awareness

[1]

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