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PHYSICAL EDUCATION

0413/12

Paper 1 Theory

May/June 2020

1 hour 45 minutes

You must answer on the question paper.

No additional materials are needed.

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- You may use a calculator.
- You should show all your working and use appropriate units.

INFORMATION

- The total mark for this paper is 100.
- The number of marks for each question or part question is shown in brackets [].

This document has **16** pages. Blank pages are indicated.

1 Name the muscle group that causes each of the following types of movement at the knee:

flexion

extension.

[2]

2 The photograph shows elite performers in a cycle race that lasted several hours. These performers need high levels of cardiovascular endurance.



(a) Name **two** other components of fitness needed by the performers shown in the photograph. Describe an example of when each component might be used during the race.

component of fitness 1

example

.....

component of fitness 2

example

.....

[4]

(b) Before taking part in a physical activity a performer should complete a warm up.

Name **three** phases of a warm up and describe a different benefit of each phase for a performer.

phase 1

benefit

.....

phase 2

benefit

.....

phase 3

benefit

.....

[6]

[Total: 10]

3 (a) Describe, using examples from a named physical activity, **one** open and **one** closed skill. Justify your answers.

physical activity

open skill

justification

.....

closed skill

justification

.....

[4]

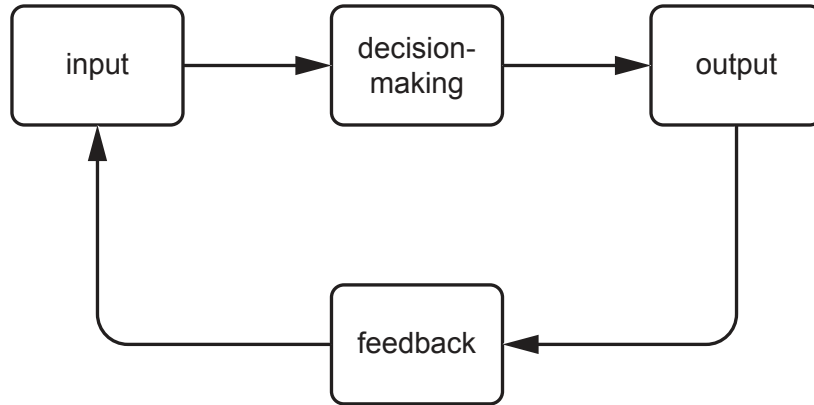
(b) Name **two** other continua that can be used to classify skills.

continua 1 and

continua 2 and

[2]

(c) The diagram shows the stages of a basic information-processing model.



Describe how each of the **four** stages of the model are used by a performer shooting in either netball or basketball.

input

.....

decision-making

.....

output

.....

feedback

.....

[4]

[Total: 10]

4 Explain how **three** factors can affect participation in physical activities for young people.

factor 1

explanation

.....

factor 2

explanation

.....

factor 3

explanation

.....

[6]

5 One feature of social health and well-being is that essential human needs are met.

Name **two** other features of a person's social health and well-being and describe how each feature can benefit a performer.

feature 1

benefit

.....

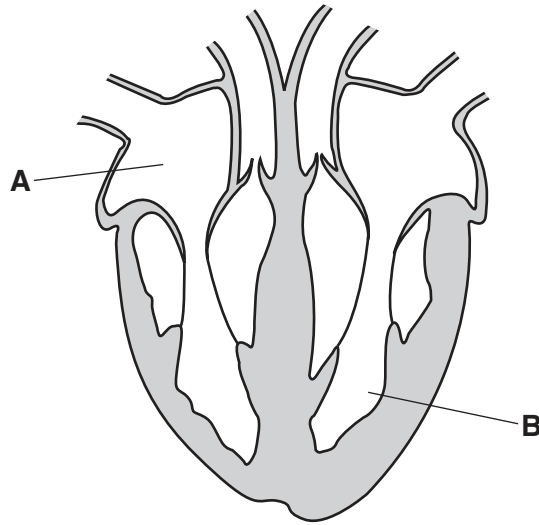
feature 2

benefit

.....

[4]

6 The diagram shows the heart with structures labelled **A** and **B**.



(a) Name the structures labelled **A** and **B** and describe a different function of each structure.

structure **A**

function

.....

structure **B**

function

.....

[4]

(b) Describe the long-term effects of exercise on the heart.

.....

.....

.....

.....

.....

..... [3]

[Total: 7]

7 (a) Identify the joint type at each of the following locations in the human skeleton:

the cranium

the elbow.

[2]

(b) (i) Name the type of synovial joint found at the hip.

..... [1]

(ii) Describe different functions of each of the following components of the hip joint:

joint (fibrous) capsule

function

.....

cartilage

function

.....

ligament.

function

.....

[3]

(c) (i) One function of the skeleton is protection.

State **two** other functions of the skeleton.

1

2

[2]

(ii) Describe **two** examples of the skeleton providing protection when performing different skills in a named physical activity.

physical activity

skill 1

.....

.....

skill 2

.....

.....

[2]

[Total: 10]

8 Suggest a different cause and describe a different treatment to aid recovery for each of the following:

winding

cause

treatment

muscle strain

cause

treatment

blister.

cause

treatment

[6]

9 An inexperienced and unfit performer is training in preparation to run in a long-distance charity race. The performer starts by running at a steady pace for twenty minutes once per week.

(a) (i) State the method of training being used.

..... [1]

(ii) State a suitable intensity for this method of training.

..... [1]

(iii) Suggest advantages and disadvantages of this method of training.

.....
.....
.....
.....
.....
.....
.....
.....
.....
..... [4]

(b) Name **three** of the principles of overload and describe how each principle could be applied to the method of training.

principle 1

application

.....
.....

principle 2

application

.....
.....

principle 3

application

.....
.....

[6]

[Total: 12]

10 (a) Describe **two** different types of feedback.

1

.....

2

.....

[2]

(b) Explain the importance of receiving feedback.

.....

.....

.....

..... [2]

(c) Explain, using examples from a named physical activity, how **two** types of guidance can be used by a coach.

physical activity

type of guidance 1

.....

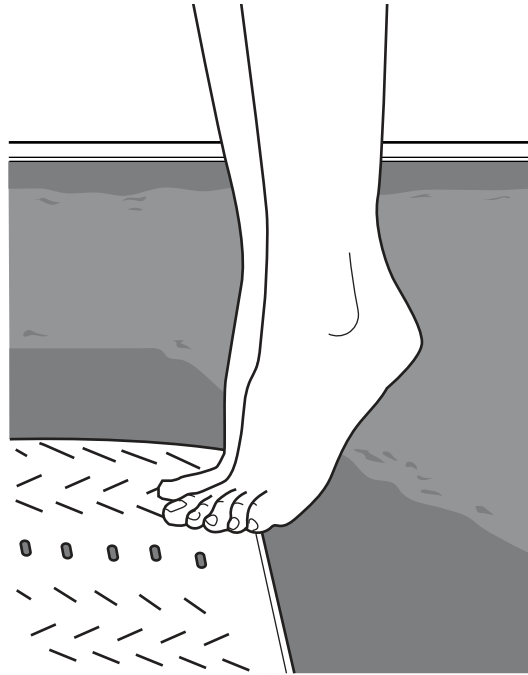
type of guidance 2

.....

[2]

[Total: 6]

11 (a) The diagram shows a performer standing on their toes ready to dive from a diving board.



(i) Name the type of movement at the ankle used by the performer to achieve the position shown in the diagram.

..... [1]

(ii) State the class of lever used to achieve this position.
Draw a labelled diagram of this class of lever.

class of lever

[3]

(b) Explain how **two** named forces act on the performer during their dive.

force 1

explanation

.....

force 2

explanation

.....

[4]

[Total: 8]
[Turn over

12 Name **two** components of blood and describe a different function of each component.

component 1

function

.....

component 2

function

.....

[4]

13 (a) Complete the following pathway of air into the body:

- 1. nose or mouth
- 2. trachea
- 3.
- 4.
- 5. alveoli.

[2]

(b) Name **two** characteristics of the alveoli. Explain how each characteristic enables gaseous exchange to occur.

characteristic 1

.....

explanation

.....

characteristic 2

.....

explanation

.....

[4]

(c) Suggest the benefits for a performer of efficient gaseous exchange.

.....

.....

.....

..... [2]

[Total: 8]

14 The table shows different types of prohibited performance-enhancing drug (PED).

Complete the table to describe an effect on performance for each type of PED in a named physical activity.

| type of PED | effect on performance in a named physical activity |
|-------------------|----------------------------------------------------------------------------------|
| stimulants | increases alertness in a 100-metre sprint in athletics to achieve a faster start |
| diuretics | |
| anabolic steroids | |
| beta blockers | |

[3]

15 (a) Define what is meant by each of the following terms:

sportsmanship

.....

gamesmanship.

.....

[2]

(b) Describe, in a named physical activity, **one** example of each of the following:

sportsmanship

.....

gamesmanship.

.....

[2]

[Total: 4]

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