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Centre number						Candidate number				
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**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
ADVANCED SUBSIDIARY GCE**

G451

PHYSICAL EDUCATION

An Introduction to Physical Education

FRIDAY 20 MAY 2011: Morning

DURATION: 2 hours

SUITABLE FOR VISUALLY IMPAIRED CANDIDATES

Candidates answer on the question paper.

OCR SUPPLIED MATERIALS:

None

OTHER MATERIALS REQUIRED:

None

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

- **Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **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. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).**
- **Answer ALL parts of the question in each of Sections A, B and C.**

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 90.**
- **The quality of your written communication will be assessed in questions that are indicated accordingly (*).**

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SECTION A

Answer ALL parts of the question.

ANATOMY AND PHYSIOLOGY

1 (a) The volume of blood pumped around the body by the heart varies according to the intensity of exercise performed.

(i) Define stroke volume and give a resting value for the average adult.

[2]

(ii) Describe the changes that take place to stroke volume from rest to maximal exercise levels.

[3]

(b) One reason for performing a cool down after exercise is to maintain blood pressure.

(i) Define blood pressure and identify a diastolic value for a person suffering from hypertension.

[2]

(ii) Describe THREE other effects of an active cool down on the vascular system of the performer.

[3]

(d) During exercise the volume of air expired will increase compared to resting levels.

Describe the mechanics of expiration during exercise.

[4]

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