OCR
Oxford Cambridge and RSA

GCSE Physical Education

J587/01 Physical factors affecting performance

Question Set 3
Section A: Applied Anatomy and Physiology

1 The knee is an example of a synovial joint.

Complete the table below for the knee joint.

Type of joint (other than synovial)	Articulating bones	Movements available
(i).....	Femur and **(ii)**.....	**(iii)**..... and Extension

[3]

2 **Fig. 1 shows a diagram that highlights one plane of movement.**

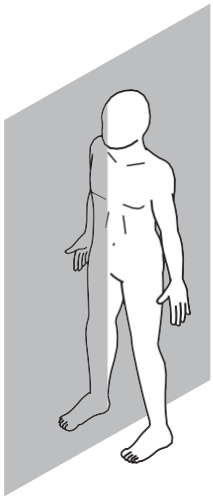


Fig. 1

(a) Name the plane of movement highlighted in **Fig. 1** above. **[1]**

(b) Give a practical example of a skill that passes through the plane of movement above. **[1]**

3 Which **one** of the following muscles is located in the upper part of the human body?

Put a tick (✓) in the box next to the correct answer.

(A) gastrocnemius ☐

(B) gluteals ☐

(C) hamstrings ☐

(D) pectorals ☐ **[1]**

4 Arteries have a thick layer of muscle compared to the thin muscular walls of veins.

Other than thickness, describe **two** other differences between arteries and veins. **[2]**

5 A short-term effect of exercise is the hypertrophy of muscle.

Is this statement true or false? Draw a circle around your answer.

True **False** **[1]**

6 (a) Draw and label an arrow on **Fig. 2** below, indicating the location of the aorta in the heart. **[1]**

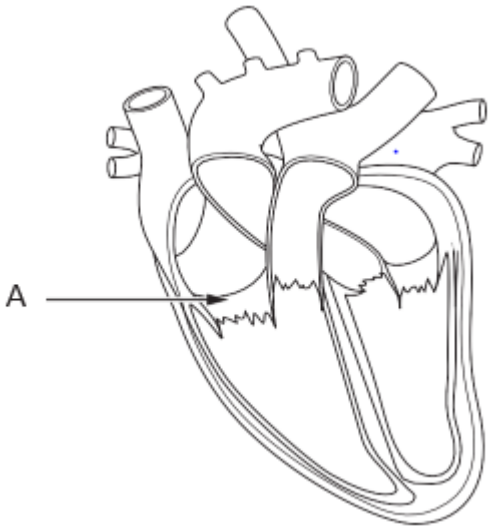


Fig. 2

6 (b)

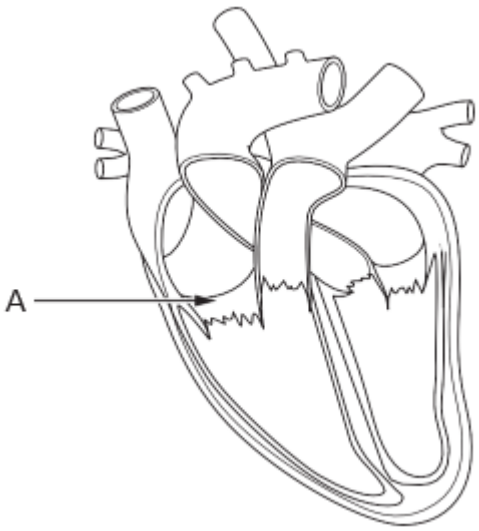


Fig. 2

Arrow A in **Fig. 2** above shows the location of the tricuspid valve.

Describe the function of the tricuspid valve. **[1]**

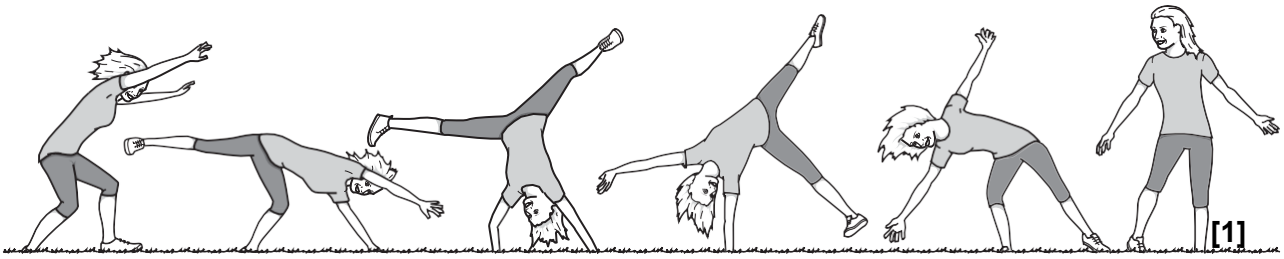
7 The heart is divided into the left and right ventricles, which prevents the mixing of oxygenated and deoxygenated blood.

Name the part of the heart that allows this to happen. **[1]**

8 Give **one** practical example of an anaerobic physical activity.

[1]

9 The performer in **Fig. 3** has just performed a cartwheel.



[1]

Fig. 3

Identify the main plane of movement that the performer has passed through during the execution of the skill shown in **Fig 3**.

10 Describe the role of the diaphragm during inspiration and expiration whilst taking part in physical activity.

[1]

11 **Fig. 4** shows a footballer preparing to kick the ball.

Fig. 4

Explain the role of the quadriceps and hamstrings as the footballer prepares to kick the ball. **[2]**

12 **(a)** Using **Fig. 5** below, draw a line through the centre of the body that represents the longitudinal axis of rotation.

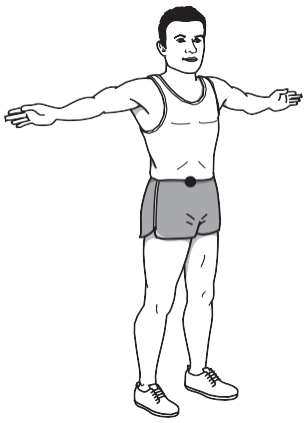


Fig. 5

[1]

(b) Give a practical example of a movement in sport that uses this axis of rotation.

[1]

Total Marks for Question Set 3: 18

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