DRAFT SPECIMEN ASSESSMENT MATERIAL

GCSE
PHYSICAL EDUCATION

Paper 1 – The human body and movement in physical activity and sport

2018 Morning Time allowed: 1 hour 15 minutes

Materials
For this paper you must have:
- a calculator

Instructions
- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Fill in the boxes at the bottom of this page.
- Answer **all** questions. You must answer the questions in the spaced provided. Do **not** write outside the box around each page or on blank pages
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information
- The marks for questions are shown in brackets.
- The maximum mark for this paper is 78.
- Questions should be answered in continuous prose. You will be assessed on your ability to:
  - use good English
  - organise information clearly
  - use specialist vocabulary where appropriate.

Please write clearly, in block capitals, to allow character computer recognition.

Centre number ☐☐☐☐☐ Candidate number ☐☐☐☐

Surname

Forename(s)

Candidate signature _____

Answer **all** questions.

For questions with four responses only **one** answer per question is allowed.

For each answer completely fill in the circle alongside the appropriate answer.

CORRECT METHOD  WRONG METHODS 

If you want to change your answer you must cross out your original answer as shown. 

If you wish to return to an answer previously crossed out, ring the answer you now wish to select as shown. 

0 1 Which **one** of these is an immediate effect of exercise?

A Improvement in muscular endurance ⬭

B Improvement in stamina ⬭

C Increase in aerobic fitness ⬭

D Increase in heart rate ⬭

[1 mark]

0 2 Which **one** of these performers relies most heavily on their cardiovascular endurance?

A 200m runner ⬭

B 10,000m runner ⬭

C Discus thrower ⬭

D Long jumper ⬭

[1 mark]

0 3 Which **one** of these shows how to calculate the mechanical advantage of a lever?

A Effort arm x weight (resistance) arm ⬭

B Effort arm ÷ weight (resistance) arm ⬭

C Effort arm + weight (resistance) arm ⬭

D Effort arm - weight (resistance) arm ⬭

[1 mark]

0 4 Which **one** of these describes flexibility?

A Changing direction at speed with control ⬭

B Combination of strength and speed ⬭

C Range of movement possible at a joint ⬭

D Supplying oxygen to the working muscles ⬭

[1 mark]

0 5 Which **one** of these moves operates around the transverse axis and along the sagittal plane?

A 360^{o} twist (ice skating spin) ⬭

B Cartwheel ⬭

C Front somersault ⬭

D Discus thrower rotating in circle ⬭

[1 mark]

Turn over for the next question

0 6 Which **one** of these causes flexion of the arm at the elbow?

A Biceps ⬭

B Deltoid ⬭

C Pectorals ⬭

D Triceps ⬭

[1 mark]

0 7 Which bones are found at the shoulder joint?

A Femur and tibia ⬭

B Humerus and radius ⬭

C Scapula and humerus ⬭

D Tibia and fibula ⬭

[1 mark]

0 8 Which bones are found at the elbow joint?

A Femur and tibia ⬭

B Humerus and radius ⬭

C Scapula and humerus ⬭

D Tibia and fibula ⬭

[1 mark]

0 9 . 1 Identify the type of synovial joint working at the shoulder.

[1 mark]

0 9 . 2 Explain **two** of the features of the shoulder joint that aim to prevent injury occurring.

[2 marks]

1 0 Identify the **two** types of movement that can occur at a hinge joint.

[2 marks]

1.

2.

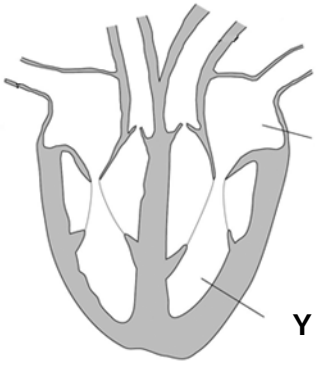
1 1 **Figure 1** shows a diagram of the heart.

Using **Figure 1**, identify the names of the chambers of the heart labelled **X** and **Y**.

[2 marks]

Figure 1

Right Left



X _____

Y _____

1 2 Define cardiac output.

[1 mark]

1 3 . 1 For an elite athlete, is the 100m sprint an aerobic or anaerobic event? Explain your answer.

[3 marks]

1 3 . 2 Explain how an athlete could calculate his/her aerobic training zone.

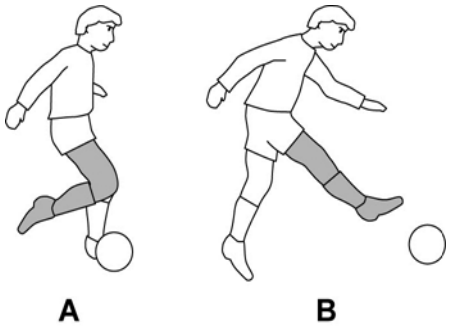
[2 marks]

1 4 Explain why continuous training might not be appropriate for a games player.

[2 marks]

1 5 **Figure 2** shows a person kicking a football.

Figure 2



Complete **Table 1** to show the joint action occurring at the knee from position **A** to position **B and** the agonist muscle group that causes this action.

[2 marks]

Table 1

Joint action	Agonist muscle group

Turn over for the next question

1 6 . 1 The respiratory system undergoes a number of changes during exercise.

Define the terms tidal volume **and** residual volume.

[2 marks]

1 6 . 2 Outline what happens to tidal volume **and** stroke volume once exercise starts.

[2 marks]

1 7 . 1 **Figure 3** shows a basketball player jumping to execute a shot.

Figure 3

Identify the lever system which operates at the ankle joint.

[1 mark]

1 7 . 2 Complete **Figure 4** by drawing the lever system identified in **17.1**, labelling the fulcrum, effort and load (resistance).

[1 mark]

Figure 4

1 8 Training in sport is often structured into seasons.

State **two** aims of pre-season training.

[2 marks]

1.

2.

1 9 State **two** reasons why fitness testing is carried out.

[2 marks]

1.

2.

Turn over for the next question

2 0 Identify a suitable test to measure flexibility. Describe how to carry out this test.

[3 marks]

2 1 Explain how the principles of overload could be used to help a beginner to improve his/her fitness.

[4 marks]

2 2 . 1 Describe the mechanics of inhalation at rest.

[2 marks]

2 2 . 2 Describe how the mechanics of breathing change during exercise.

[2 marks]

2 3 Gaseous exchange occurs at the alveoli.

Identify **two** features that assist in gaseous exchange at the alveoli.

[2 marks]

1.

2.

Turn over for the next question

2 4 . 1 Explain what should be considered at the start of a hockey training session to reduce the chance of injury occurring.

[2 marks]

2 4 . 2 Identify **two** parts of an effective cool down.

[2 marks]

1.

2.

2 5 Movement is brought about by the muscular and skeletal systems working together.

Using an example, explain how muscles and bones work together to produce movement.

[4 marks]

2 6 The vertical jump test measures leg power.

Discuss whether or not this is a suitable test for a football player.

[3 marks]

Turn over for the next question

2 7 . 1 **Table 2** shows the heart rates recorded by an athlete when running at different speeds.

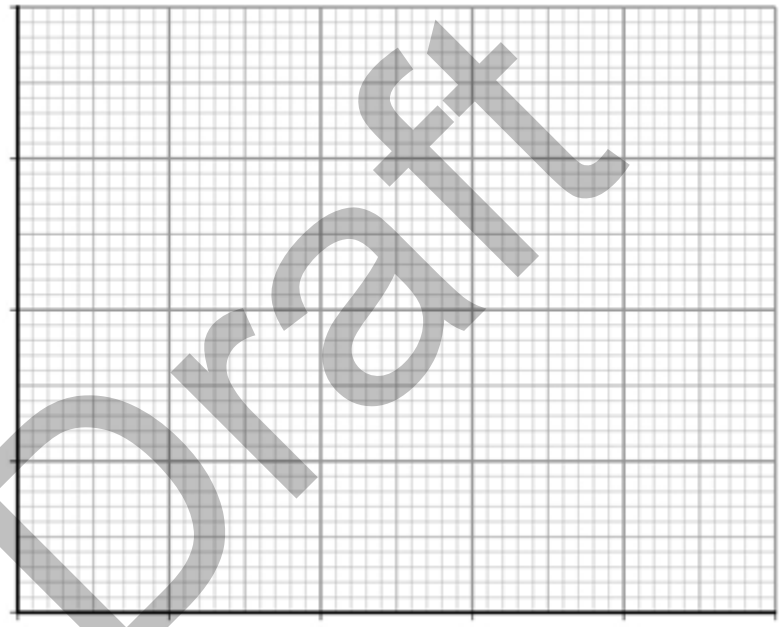
Plot the information shown in **Table 2** on the graph paper below to show how running speed affects heart rate. Label the axes and join up the points to make a line graph.

[4 marks]

Table 2 – heart rates recorded by an athlete when running at different speeds

Running speed (km/h)	9	10	11	12	13	14
Heart rate (bpm)	154	159	167	175	178	185

Heart rates recorded by an athlete when running at different speeds



2 7 . 2 Explain why high altitude training is appropriate for a marathon runner.

[3 marks]

2 8 Discuss whether or not agility and reaction time are important components of fitness for performers in the 100m sprint.

[6 marks]

Extra space

Turn over for the next question

2 9 With reference to a named sporting activity of your choice, outline the component parts of a warm up, explaining the benefits of completing each part.

[6 marks]

Extra space

END OF QUESTIONS