

Candidate Marks Report

Series : 6 2018

This candidate's script has been assessed using On-Screen Marking. The marks are therefore not shown on the script itself, but are summarised in the table below.

Centre No :	Assessment Code :	J587
Candidate No :	Component Code :	01
Candidate Name :		

Total Marks :

In the table below 'Total Mark' records the mark scored by this candidate.
'Max Mark' records the Maximum Mark available for the question.

Section A

Answer all the questions.

- 1 Describe the function of alveoli.

turn deoxygenated blood into oxygenated
blood by diffusion

[2]

- 2 Fig. 1 below shows a diagram of the heart.

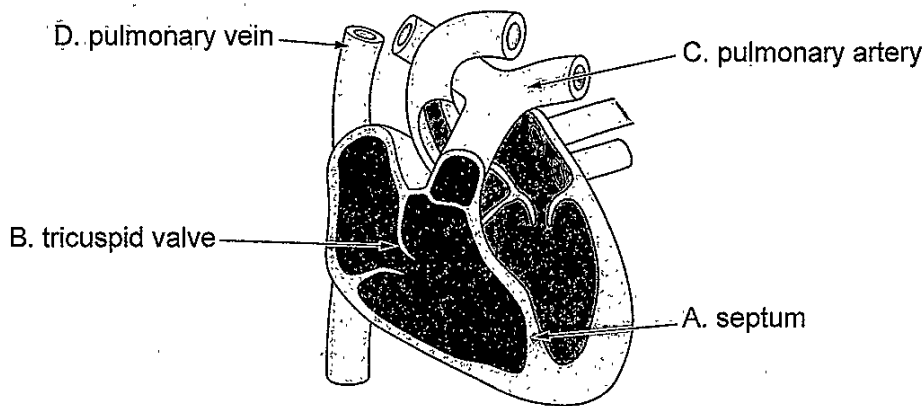


Fig. 1

Identify the part of the heart that is labelled incorrectly in Fig. 1.

pulmonary vein [1]

- 3 Give a definition of a synovial joint.

[1]

- 4 A rugby player will use their shoulder joint when making a tackle.

Name the **two** articulating bones in the shoulder joint that are at risk of injury during a rugby tackle.

1. clavicle

2. humerus

[2]



5 Reversibility is a principle of training.

Using a practical example, explain what is meant by the term 'reversibility'.

reversibility is for example when a football player that ~~is~~ has been training at very high intensity through out all season and she suddenly stops training all the physical developement and capacity will be lost. [2]

6 Which **one** of the following shows the correct distances for the multi-stage fitness test and the test for speed?

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

- A 30 m for the multi-stage fitness and 25 m for the speed test
- B 20 m for the multi-stage fitness and 25 yards for the speed test
- C 20 m for the multi-stage fitness and 30 m for the speed test
- D 30 m for the multi-stage fitness and 30 yards for the speed test

[1]

7 Fig. 2 shows a diagram of the lower leg.

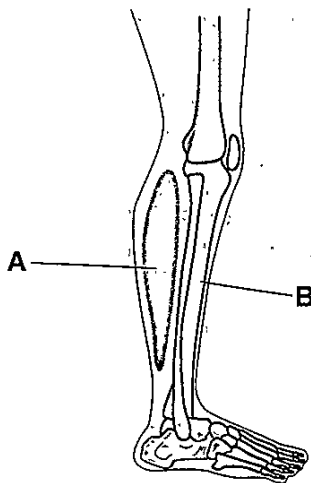


Fig. 2

Identify muscle A and bone B.

(i) Muscle A: Gastronemius [1]

(ii) Bone B: Tibia [1]

Turn over



8 Identify two potential hazards in a swimming pool.

1. Slippery floor because of water.....
2. Chemicals in the water.....

[2]

9 Using practical examples, explain the difference between the transverse and longitudinal axes of rotation.

The longitudinal axis runs vertically the body from top to bottom and the ~~the~~ transverse axis runs the body horizontally from left to right.

The movement in a transverse axis is flexion & extension for example a big-diver performing a somersault. On the other hand, the longitudinal axis the movement

is rotation for example a ice skater performing a flat spin.

10 Give a practical example where aerobic endurance is important in sport.

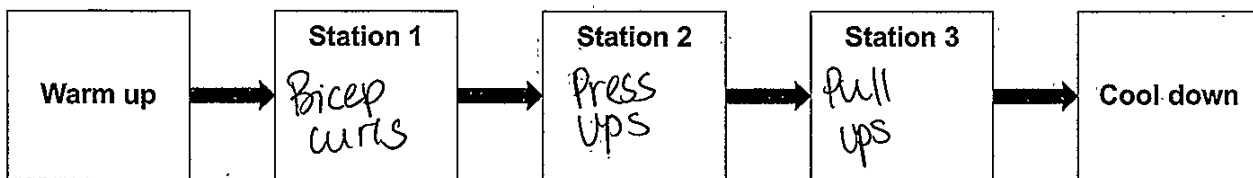
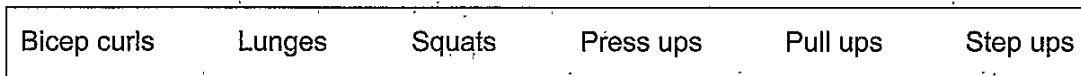
Running a marathon..... [1]

11 (a) Circuit training is a training method that consists of a series of exercise stations.

Describe one other feature of circuit training.

high intervals of rest and high intensity..... [1]

(b) Design a simple circuit training session to overload the upper body by completing the diagram below; placing one of the named exercises in each station.



[1]



12 Cartilage plays an important role in the skeletal system.

Assess how cartilage helps a marathon runner during performance.

Cartilage absorbs shock for example when running. It absorbs shock on the runners knees also. It prevents friction between the bones which make easier to the ~~near~~ runner to move the articulations and being able to run. [2]

13 Which class of lever will a weightlifter be using when performing a bicep curl?

third class [1]

14 The performer in Fig. 3 below has performed a movement that has passed through the frontal plane.

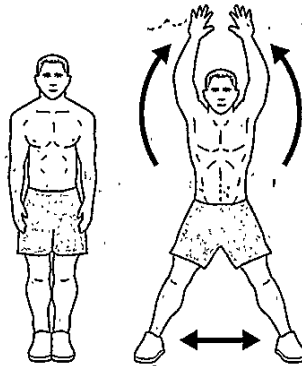


Fig. 3

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

True

False

[1]

15 Which one of the following statements is false?

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

- A Fixators help stabilise a joint and prevent unnecessary movement
- B Most lever systems in the body are 3rd class
- C A common hazard in rugby is concussion
- D Fartlek training improves speed and endurance

[1]

Turn over



16 Fig. 4 shows a diagram that highlights one plane of movement.

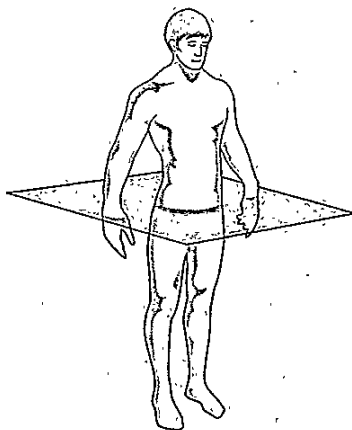


Fig. 4

Name the movement plane highlighted in Fig. 4 above.

..... transverse [1]

17 Describe a suitable cool down for a dancer.

..... pulse lowering after performing for example
 walking around the dance floor to keep the
 oxygen flowing to the working muscles.
 Stretching will help her to lower muscle temperature [2]
 and to let oxygen flow through the muscles to prevent lactic acid

18 Give a practical example of how an appropriate level of competition can prevent injury to a performer in a sport or physical activity.

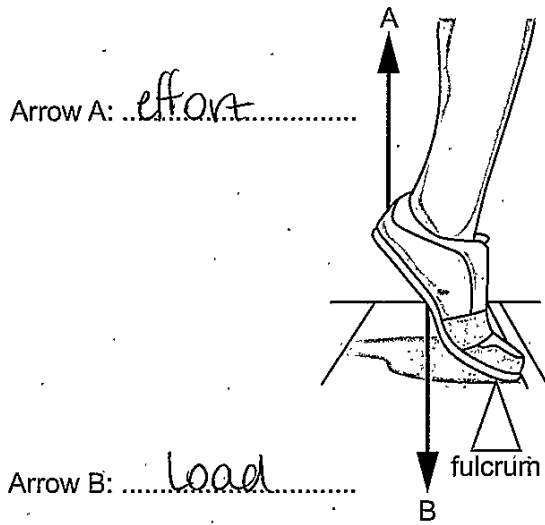
..... For example when wrestling if you are fighting
 against someone that has the same weight you [1]
 will prevent injury caused by the weight difference.

production for
 example stretching
 the hamstrings.



19 Fig. 5 shows a picture of the foot of a long jumper taking off.

Label Arrows A and B to correctly identify the components of this lever system.



F	1
L	2
E	3

Fig. 5

[1]

20 The human heart is part of a single-circulatory system.

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

True

False

[1]



Section B

Answer all the questions.

- 21 (a) Explain the short term effects on the heart and the blood of a swimmer performing a 100m front crawl.

The swimmer's heart rate will increase so more blood is pumped to the working muscles. The volume of blood pumped per minute (cardiac output) will increase and the volume of blood pumped per contraction (stroke volume) will increase too. The oxygenated blood will be redistributed to the working muscles^{→ (arms, legs)} by vasodilation (artery gets wider) so more blood flows and the less blood will be redistributed to the inactive muscles (stomach) by vasoconstriction (artery gets narrower) so less blood flows. This last process is called [5]

- (b) A swimmer who undergoes a six month training programme will experience muscular hypertrophy.

- (i) What is meant by the term 'muscular hypertrophy'?

Muscles get bigger and stronger therefore ~~therefore more strength and better performance~~ [1]

- (ii) Describe other muscular benefits the six month training programme might have for the swimmer.

Increase in muscular endurance, will help the swimmer to be able to swim for longer and at a higher intensity.

Increase in muscular strength will help the swimmer to push the water easily therefore she will be able to swim quicker.

[4]



- 22 (a) Reaction time and speed are important fitness components required for a 100 m sprinter.

Define the fitness components of reaction time and speed and explain their importance to a 100 m sprinter.

Reaction time is how long it takes the body to react to a stimulus. It is important for a 100 m sprinter because she needs to be able to react as quick as possible so she can gain advantage when the horn that indicates the start of the race is blown. Speed is how quick you are able to move, this is very important for a 100 m runner because she needs to be able to sprint as fast as possible when racing. [4]



(b)* Before an athlete participates in a sprint they will complete a warm up to prepare their body and mind for the race.

Using practical examples, describe the components of a warm up and evaluate the different mental preparation techniques that could be used to fully prepare the athlete for the race.

Pulse raising exercises during warm up will help the athletes to increase the volume of oxygen that goes to the working muscles and to raise the temperature of the muscles for example jogging ~~and~~ around the track field at a steady intensity. After this, the athlete should stretch ~~to~~ to increase the mobility of the joints and prevent injury for example doing lunges. To raise muscle temperature, the athlete should do dynamic movements, for example, ~~sprinting~~ doing short sprints. Finally the athlete should do skill rehearsal, ~~to~~ to be able to prepare herself for the race for example practicing the ~~post~~ start position or the ~~leg movements~~ use of the proper technique to a better performance.

The athlete could use positive thinking during the warm up to gain confidence, for example thinking about past races that she has won. Also, mental rehearsal can help ~~be~~ the athlete to control anxiety and to improve the performance afterwards, this means for example ~~and~~ ~~imagining~~ thinking and picturing the different techniques that she has to use. Finally imagery will help the athlete to ~~a~~ control anxiety. [6]



23 Fig. 6 below shows the respiratory rate for two hockey players before, during and after a match.

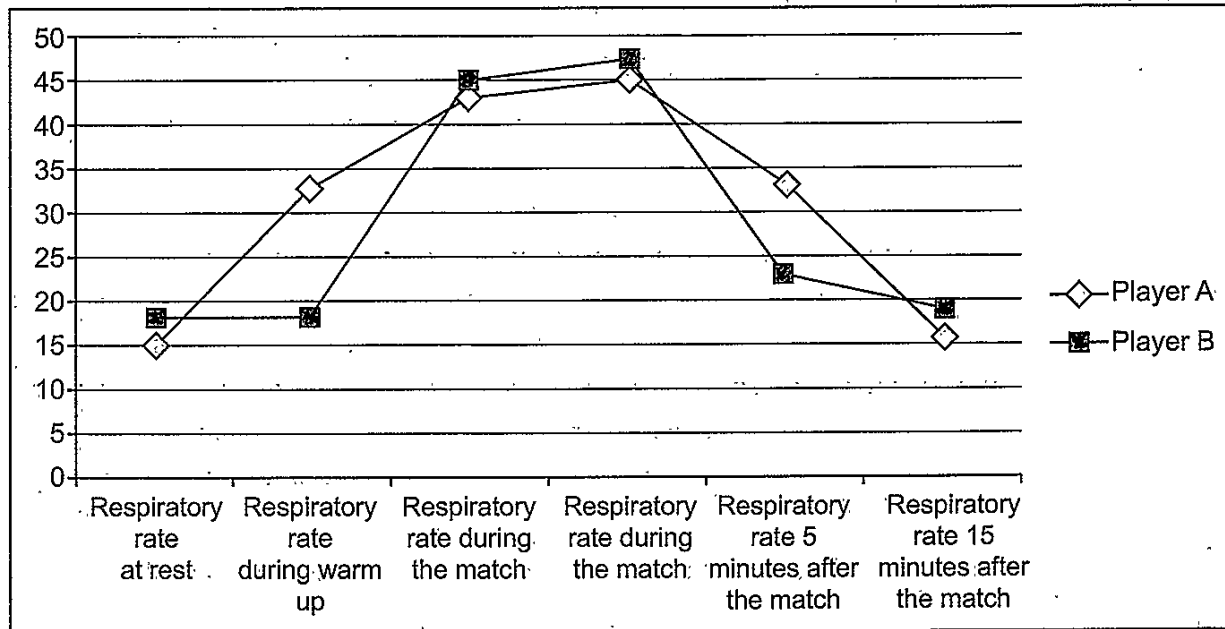


Fig. 6

- (a) Using the information in Fig. 6, analyse how the two players' respiratory rates compare and why they may be different.

Player A's respiratory rate is lower than player B's which suggest that player is fitter as because he doesn't to breath as much.

During performance player B's heart rate is higher which suggests that he has been performing at a higher intensity.

After performance player A's breathing rate lowers slower than players B's.

[3]



(b) Explain the rôle of respiratory muscles during inspiration while player A. is performing in the hockey match.

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..... [4]

(c) Analyse the effects that lactic acid could have on the performance and recovery of the hockey players.

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..... [3]

END OF QUESTION PAPER



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ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

22 b. before performance and perform better for
example picturing herself during training
in a place where she is calm.



Handwriting practice area with a vertical line on the left and horizontal dotted lines for writing.

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