

(d) Obese is:

- A Having an excess of muscle which restricts mobility.
- B The percentage of body weight which is fat, muscle and bone.
- C Muscles in a state of slight tension.
- D Being very overfat.

(1)

(e) Athlete's foot is caused by:

- A An increase in foot size due to training.
- B A virus.
- C A fungus.
- D An injury associated with 100 m runners.

(1)

(f) Which of the following activities would present an unsupervised beginner with the greatest risk?

- A Skiing
- B Table Tennis
- C Badminton
- D Aerobics

(1)

(g) Which of the following is a TRUE statement about tennis or golfer's elbow?

- A You can only get tennis or golfer's elbow if you play tennis or golf.
- B Tennis and golfer's elbow is a joint injury.
- C Tennis and golfer's elbow is a soft tissue injury.
- D Tennis or golfer's elbow can be caused by under-use of the muscles in the lower arm.

(1)

(h) Which of the following statements describes the double pump action of the heart?

- A The amount of blood pumped from the heart per minute.
- B Blood is pumped out of the atria to the ventricles and then from the ventricles to the lungs and to the body.
- C Blood is pumped from the ventricles to the lungs and to the body.
- D The pumping of the right and left ventricles.

(1)

2. Hugh is

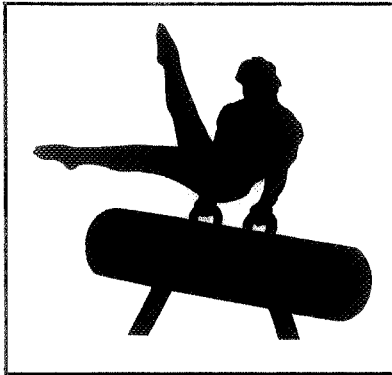
Complete
Explain

1

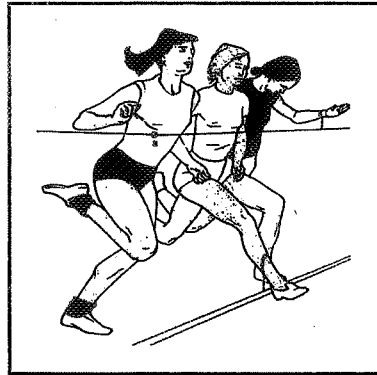
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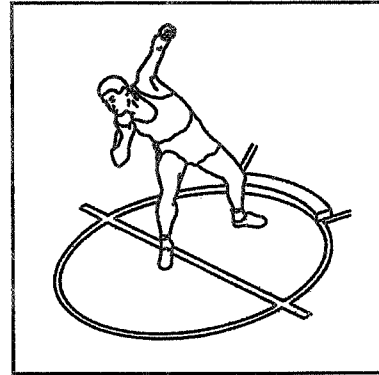
4. Figure 2 shows performers participating in physical activity.



A



B



C

Figure 2

Complete the table below naming **ONE** component of Skill Related Fitness that will be important to each performer. Explain how these components will help each performer in his/her activity. You must choose a different component for each performer.

Performer	Component of skill related fitness	How component of skill related fitness helps performance
<p>A: GYMNAST</p>		
<p>B: SPRINTER</p>		
<p>C: SHOT PUTTER</p>		

(Total 6 marks)

Q4

6. (a) Complete the table below by ticking the training methods that you think would be most likely to increase the aerobic and anaerobic fitness of an athlete. You may tick more than one training method for each aspect of fitness.

	Interval	Circuit	Weight
Example: Strength			✓
Aerobic fitness			
Anaerobic fitness			

(4)

(b) What extreme body type (somatotype) is associated with elite athletes who carry out a lot of

(i) strength training (1)

(ii) continuous training (1)

(Total 6 marks)

Q6

8. (a) Figure 3 shows a swimmer placed in the recovery position at the side of a swimming pool.

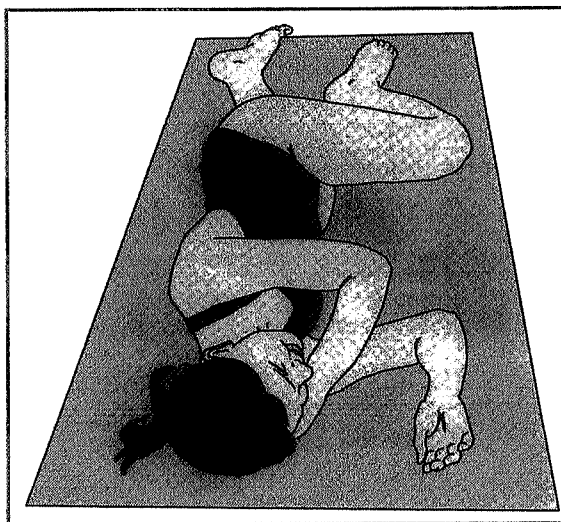


Figure 3

- (i) When would someone be placed in the recovery position?

..... (1)

- (ii) What might have happened to the swimmer to require her to be placed in the recovery position?

..... (1)

- (iii) Why would the swimmer be placed in the recovery position rather than laid on her back or front on the poolside?

..... (1)

- (iv) Once the swimmer has been placed in the recovery position, what should the First Aider do whilst waiting for expert help to arrive?

..... (1)

9. Figure 5 is a diagram of the human heart.

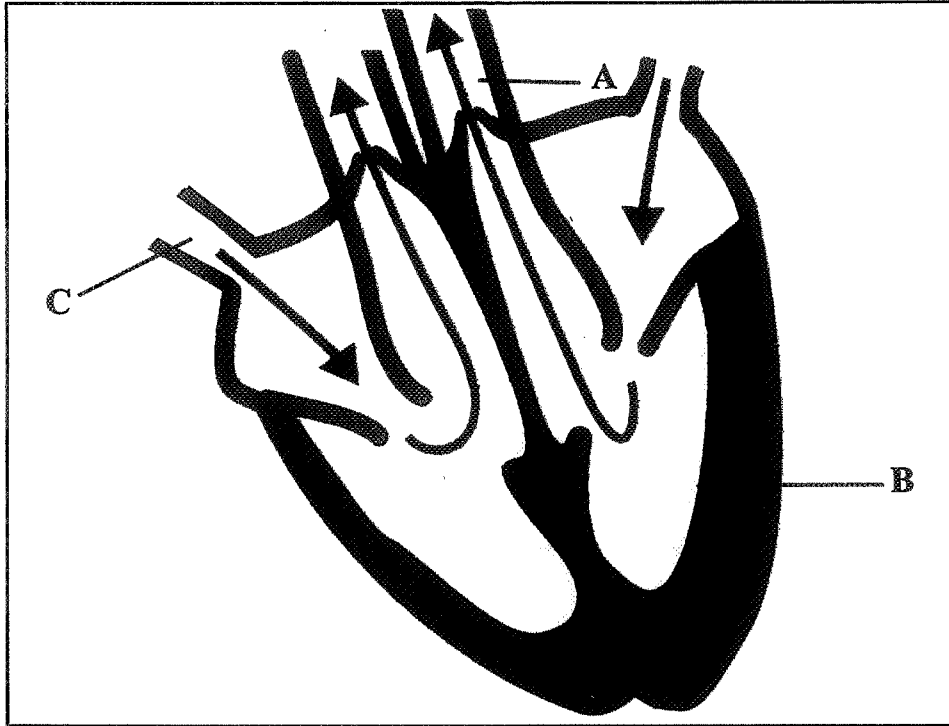


Figure 5

(a) Name the parts labelled A, B and C.

- (i) A (1)
- (ii) B (1)
- (iii) C (1)

(b) What effect would **long-term training** have on the part of the heart labelled B?

..... (1)

(c) Why do the walls of the vessel labelled A need to be thicker than those labelled C?

..... (1)

(Total 5 marks)

Q9

11. Figure 6 shows a high jumper clearing the bar.

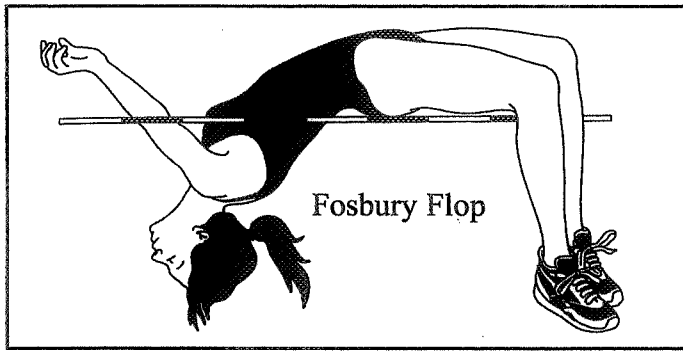


Figure 6

(a) State **TWO** regions of the vertebral column and explain how the function of these regions helps the high jumper clear the bar. You must use a different function for each of the regions of the vertebral column.

Region of vertebral column	Function	How this helps high jumpers
1		
2		

(6)

(b) The bones of the vertebral column are separated by discs.

(i) What are these discs made of?

..... (1)

(ii) What is their function?

..... (1)

14. Fara is a 100m hurdler. She trains regularly and thinks carefully about her Personal Exercise Programme (PEP) as she has seen many of her team mates injured through over training. To help her understand the requirements of her sport, she analyses her performance regularly. Fara's coach told her that her training was proving effective as her performance was improving.

(a) Define the term 'performance'.

..... (1)

(b) The following are statements taken from Fara's PEP.

- A I need to make sure my training matches the requirement of my sport, therefore I shall be using interval training.
- B I found the workload far too easy last week so I shall be training harder this week.
- C I think it is important to gradually increase the amount of work that I do.
- D I need to structure my PEP to my needs, no one else's.
- E Unfortunately I had to have a minor operation on my knee. I was unable to train for 6 weeks, which means that I have already started to lose my fitness.

(i) Complete the table below by naming **THREE** principles of training (other than the F.I.T.T principle) that Fara has referred to in the statements from her PEP. Explain the meaning of each of the principles.

Principle of training		Explanation
1		
2		
3		

(6)

(b) Which muscle, A, B or C, allows the runner to drive forwards off the toes during his running action?

..... (1)

(c) Which muscle, A, B or C, allows the runner to extend the leg at the hip?

..... (1)

(d) Two of the muscles named in the box below work as an **antagonistic pair**. Name the two muscles.

Bicep	Hamstrings	Deltoid	Quadriceps	Gluteals
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.....and..... (1)

(e) Explain the term 'antagonistic pair'.

.....
..... (1)

(Total 7 marks)

Q12

TOTAL FOR SECTION TWO: 80 MARKS

(d) The graph shows that Ashan's heart rate varies during the training session. Give a possible reason for this variation.

.....
.....
(1)

(e) Name a type of training method that would cause this variation in heart rate.

.....
(1)

(f) What happens to Ashan's heart rate during the 10 minute period after training has finished?

.....
(1)

(g) Give TWO reasons why the heart needs to continue to work harder than normal, even after the training session has finished.

1.
(1)

2.
(1)

(h) At times Ashan is working well within his target heart rate training zone. What does this mean?

.....
.....
(1)

(i) Ashan is 16. Use this information to show how he would calculate his training zone by completing the following statements.

(i) Maximum heart rate is minus his age.

(ii) Therefore Ashan's maximum heart rate will be(bpm).

(iii) The upper limit of his target heart rate training zone should be..... % of his maximum heart rate.

(iv) The lower limit of his target heart rate training zone should be..... % of his maximum heart rate.

(4)

(d) Figure 9 shows a diagram of the skeleton of the lower leg and foot.

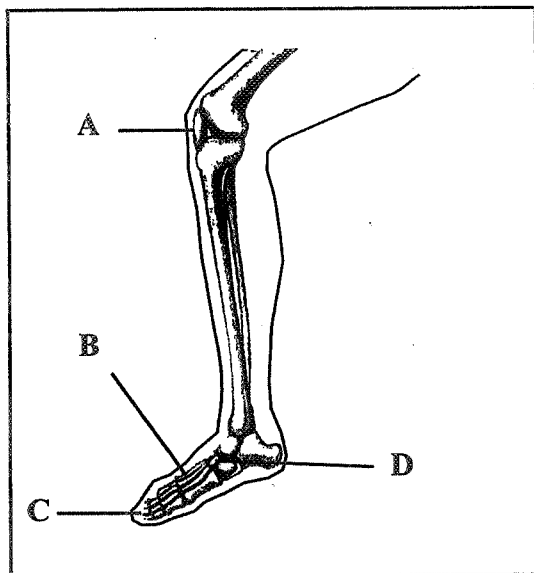


Figure 9

(i) Name the bones labelled A, B, C and D.

A (1)

B (1)

C (1)

D (1)

(ii) The bones labelled D are short bones. How does the function of a short bone help the hurdler?

..... (1)

(e) The 100m hurdles is a sprint event.

(i) What type of muscle fibres would be most useful to a 100m hurdler?

Fibre Type (1)

(ii) Why would this type of muscle fibre be useful to a 100m hurdler?

..... (1)

(Total 20 marks)

Q14

(c) Exercises can be isotonic or isometric.

Explain these terms.

(i) Isotonic
..... (1)

(ii) Isometric
..... (1)

(d) Which type of exercise (isotonic or isometric) is being carried out in the training session shown in Figure 10?

..... (1)

(e) Before undertaking any physical activity the boys make sure they warm up. State, in order, the three phases of a warm up?

1. (1)

2. (1)

3. (1)

(f) The boys are hoping to improve the efficiency of their cardiovascular and respiratory systems through their training.

(i) State ONE way in which the cardiovascular system could improve as a result of training.
..... (1)

(ii) State ONE way in which the respiratory system could improve as a result of training.
..... (1)