Surname	Centre Number	Candidate Number
Other Names		4

LEVEL 1 / LEVEL 2 AWARD – NEW

5929UB0-1

S19-5929UB0-1

FRIDAY 24 MAY 2019 – MORNING

SPORT AND COACHING PRINCIPLES

Unit 2: Fitness for Sport

1 hour 30 minutes

For Examiner's use only		
Question	**Maximum Mark**	**Mark Awarded**
1.	**16**	
2.	**16**	
3.	**20**	
4.	**19**	
5.	**19**	
Total	**90**	

5929UB01
01

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.
Write your name, centre number and candidate number in the spaces at the top of this page.
Answer **all** questions.
Write your answers in the spaces provided in this booklet.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.
The total mark is 90.

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1. Rugby players and gymnasts require different components of fitness to perform in their own activities.

Figure 1

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(a) (i) Complete the table below identifying the **two main** components of fitness that can be seen in **Figure 1** for each activity. [4]

Activity	Component of fitness 1	Component of fitness 2
Rugby	....	....

Activity	Component of fitness 1	Component of fitness 2
Gymnastics	....	....

(ii) Define each of the **four** components of fitness identified in *(a)* (i). [4]

Rugby

Component of fitness	Definition
.....	....
.....	....

Gymnastics

Component of fitness	Definition
.....	....
.....	....

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(iii) Identify a recognised fitness test that would measure **one** of the components of fitness for a rugby player. [1]

Component .....

Test .....

(iv) Identify a recognised fitness test that would measure **one** of the components of fitness for a gymnast. [1]

Component .....

Test .....

(b) (i) Identify a method of training that would improve performance in rugby and explain why you have chosen this method. [3]

Method of training	Why this method will improve rugby performance
.....	.....
	.....
	.....
	.....

(ii) Identify a method of training that would improve performance in gymnastics and explain why you have chosen this method. [3]

Method of training	Why this method will improve a gymnasts performance
.....	.....
	.....
	.....
	.....

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2.

Figure 2

(a) Describe when a badminton player would use each of the components of fitness below. [8]

Component of fitness	**Description of when the component would be used**
Reaction time	....
Speed	....
Co-ordination	....
Agility	....

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(b) (i) Draw a line to match the recognised fitness test to the component of fitness. [4]

Component of fitness	Fitness Test
Speed	Illinois
Reaction time	30 m Sprint
Co-ordination	Ruler drop
Agility	Alternate hand throw

(ii) Explain why fitness testing is important for a badminton player. [4]

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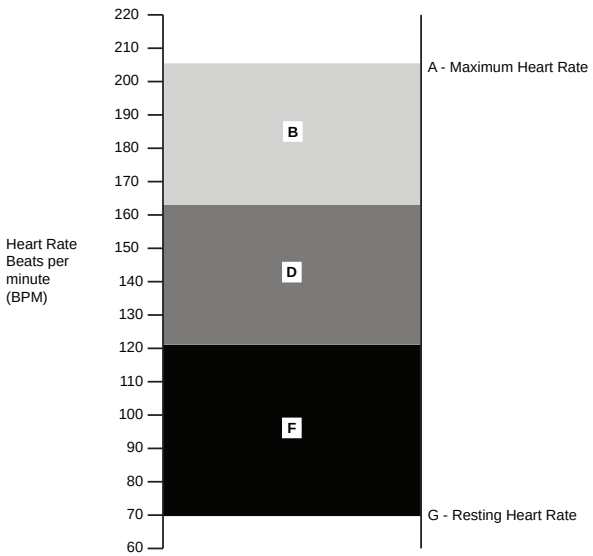
3. Cadi is a 15-year-old 1500 m endurance athlete. This event requires a mixture of both aerobic and anaerobic energy production.

(a) The graph shows the different heart rates for a 15 year old athlete.



(i) Identify when the athlete is training aerobically. [1]

Tick (✓) one box only.

B ☐

D ☐

F ☐

(ii) Explain your answer to 3*(a)*(i). [2]

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(iii) Identify when the athlete is training anaerobically. [1]

Tick (✓) one box only.

B ☐

D ☐

F ☐

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(iv) Explain your answer to 3*(a)*(iii). [2]

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(v) Identify the waste product from exercising within the aerobic energy system. [1]

Tick (✓) one box only.

CO_2 and H_2O ☐

Lactic acid ☐

Glucose ☐

Adrenaline ☐

(vi) Identify the waste product from exercising within the anaerobic energy system. [1]

Tick (✓) one box only.

CO_2 and H_2O ☐

Lactic acid ☐

Glucose ☐

Adrenaline ☐

(b) Describe **three** factors that Cadi would need to consider when developing a training programme. [3]

1. .....

.....

2. .....

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3. .....

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(c) Explain why the setting of SMART targets will help Cadi improve her fitness. [4]

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(d) **Figure 3** shows a 6 week training programme for Cadi who is returning to training after injury.

Figure 3

Training Programme A	
1. 10 minute walk, 20 minute jog, 10 minute walk. **2.** 20 minutes on a cycle ergometer at local leisure centre.	**Week 1**
1. 10 minute walk, 20 minute jog, 10 minute walk. **2.** 20 minutes on a cycle ergometer at local leisure centre.	**Week 2**
1. 25 minute jog, 10 minute walk. **2.** 20 minutes swimming at local leisure centre.	**Week 3**
1. 25 minute jog, 10 minute walk. **2.** 10 minutes on cross trainer and 15 minutes on cycle ergometer at local leisure centre.	**Week 4**
1. 30 minute jog. **2.** 15 minutes on rowing ergometer and 15 minutes on cycle ergometer at local leisure centre.	**Week 5**
1. 30 minute jog. **2.** 25 minutes swimming at local leisure centre.	**Week 6**

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(i) Analyse the main component of fitness being developed. [1]

Tick (✓) one box only.

Cardiovascular endurance ☐

Speed ☐

Agility ☐

Power ☐

Flexibility ☐

(ii) Evaluate what principles of training can be observed from the training programme. [4]

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4.

Figure 4

(a) Identify the **main** function of skeletal muscle for the sprinter. [1]

Tick (✓) one box only.

Protection ☐

Movement ☐

Muscle attachment ☐

Blood cell production ☐

(b) (i) Identify the muscle group that contracts to extend the knee. [1]

.....

(ii) Identify the muscle group that contracts to flex the knee. [1]

.....

(iii) Identify the action where one muscle contracts and the other muscle relaxes. [1]

Tick (✓) one box only.

Antagonistic action ☐

Agonistic action ☐

Prime mover action ☐

Synergist action ☐

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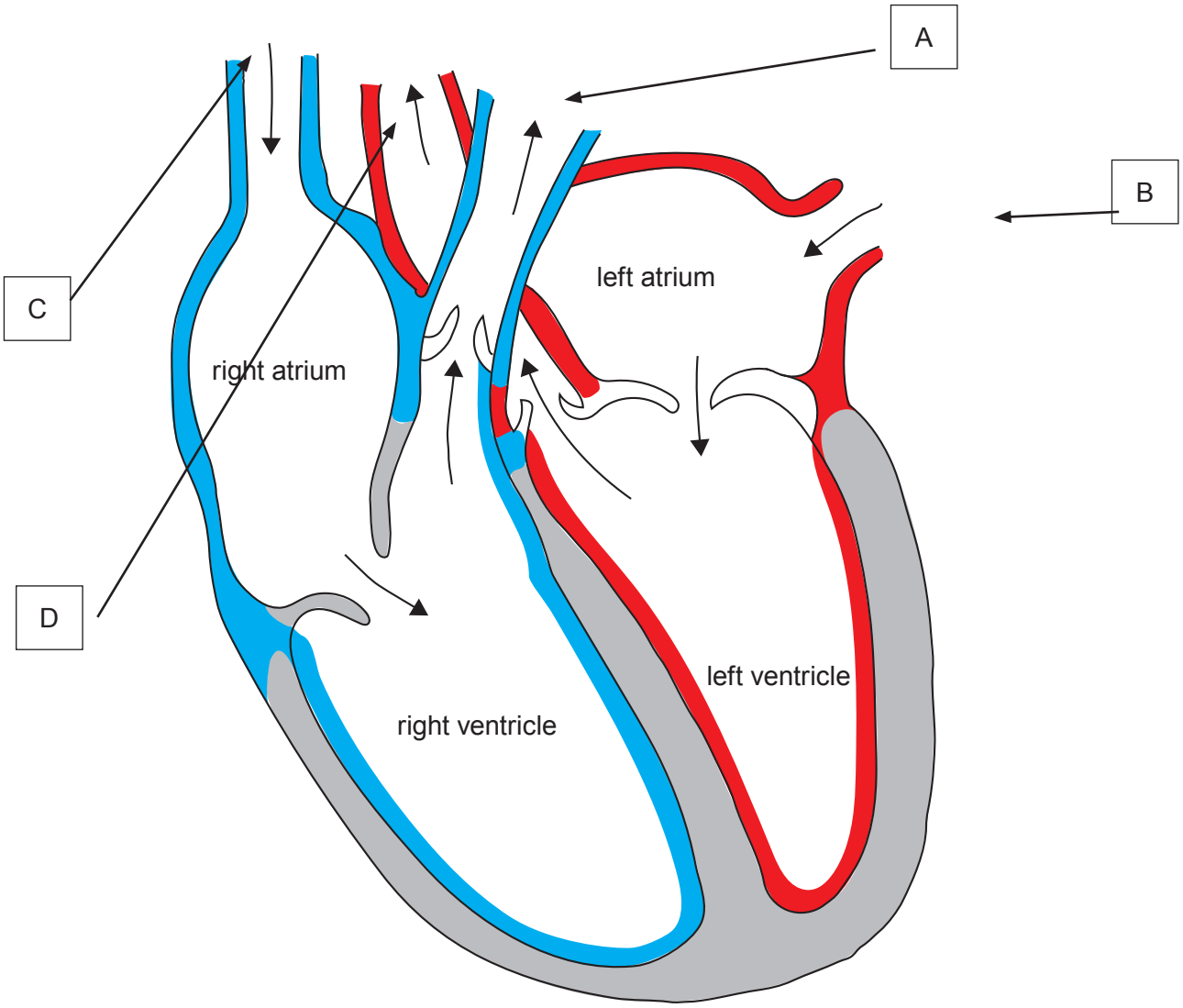
(c) During sprint training the body needs to recover from the exercise in order to be ready for the next set. The cardiovascular and respiratory systems work hard during these recovery periods.



(i) Analyse the diagram above and identify the blood vessels of the heart. [4]

Match the letter to the correct blood vessel.

Letter	Blood vessel
	Aorta
	Vena Cava
	Pulmonary artery
	Pulmonary vein

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(ii) Identify which chamber of the heart pumps oxygenated blood around the body. [1]

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(d) Describe the functions of the cardiovascular system **during** and **post** exercise for the sprinter. [4]

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(e) As a coach you have been asked to support your sprinter by helping them set appropriate targets.

Explain the importance of goal-setting to support your athlete in improving their performance. [6]

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5. *(a)* (i) Describe the differences you would expect to see between training sessions designed for elite athletes and sessions designed for sedentary individuals. [3]

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(ii) Analyse how you would apply the principles of training below to a fitness training programme.

Principle of training	Explanation of application of training method
Specificity	.... [1]
Overload	.... [5]

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(b) Describe how **you** would warm-up effectively for a sporting competition. [4]

(c) Describe the long-term adaptations you would expect following an endurance training programme **and** evaluate the impact this would have on performance. [6]

END OF PAPER

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