

Name: _____

BTEC Tech Award in Sport

Year 11 – PAZ 3

Date: _____

Time: 50 min

Total marks available: 50

Total marks achieved: _____

Percentage:

Grade:

Answer ALL questions.

Write in Black Pen only.

The number of marks for each question or part question is shown in brackets ().

Q1.

The members of a rowing club have completed two fitness tests.

Table 1 shows some of their results for the one-minute sit-up test and hand grip dynamometer test.

Name	Gender	One-minute sit-up test result (rpm)	Hand grip dynamometer test result (kg)
Chloe	Female	19	29
Ibrahim	Male	27	44
Francesca	Female	32	35

Table 1

Table 2 shows normative data for the hand grip dynamometer test.

	Category				
Gender	Excellent	Good	Average	Fair	Poor
Male	>56	51–56	45–50	39–44	<39
Female	>36	31–36	25–30	19–24	<19

Table 2

Identify, using **Table 1** and **Table 2**, the category Francesca is in for the hand grip dynamometer test.

(1)

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(Total for question = 1 mark)

Q2.

Sophie is 26 years old and took part in the 12-minute Cooper run. Her result was **1680 m**.

Table 1 shows the normative test data for the 12-minute Cooper run – females.

Age	Category				
	Excellent	Above average	Average	Below average	Poor
17–20	>2300 m	2100–2300 m	1800–2099 m	1700–1799 m	<1700 m
20–29	>2700 m	2200–2700 m	1800–2199 m	1500–1799 m	<1500 m

(Source: <http://www.brianmac.co.uk/gentest.htm>)

Table 1

Using Table 1, identify the category Sophie is in for the 12-minute Cooper run.

(1)

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(Total for question = 1 mark)

Q3.



Figure 1

Source: © art3/Shutterstock

Jake is a javelin thrower. His coach has told him that he needs to improve his speed.

Name **two** methods of training Jake could use to improve his speed.

(2)

1

2

(Total for question = 2 marks)

Q4.

Jenny plays cricket. Jenny has been training to increase her power.

State **one** reason for fitness testing.

(1)

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(Total for question = 1 mark)

Q5.

Mikey is 20 years old. He is completing his first session with a personal trainer at a gym.

Mikey has a **maximum heart rate** of **200** beats per minute (bpm).

To work at the right intensity during the warm up, his heart rate should be at 50% of his maximum heart rate.

State **two** ways of measuring Mikey's heart rate during the warm up.

(2)

1

2

(Total for question = 2 marks)

Q6.

Wayne has been told by his doctor that he is overweight. He has asked a fitness instructor to design a training programme with the aim of burning off some excess body fat.

State **two** pieces of Wayne's personal information the fitness instructor needs to aid the design of a training programme.

(2)

1

2

(Total for question = 2 marks)

Q7.

Devran is a rugby player.

Devran is talented, but his attitude to training and matches is very poor. He often looks bored, seems as though he is not trying and sometimes does not even turn up for training sessions.

The coach believes that if Devran improves his **motivation**, he will be more likely to improve his performance in training and matches.

Analyse the different **types** of motivation that could be used **and** how these would **benefit** Devran's rugby performance in the future.

(Total for question = 6 marks)

Q8.

Jahzara is a basketball player. She is training to improve her **power** using the methods of training shown in **Figure 1** and **Figure 2** below.

Complete **Table 3** by:

(i) naming the **two** methods of training for **power** that Jahzara is using

(2)

(ii) stating **one advantage** for Jahzara of using **each** of these methods of training.

(2)



	(a) Name of method of training	(b) Advantage of method of training
 <p>Figure 1 Source: © takoburito/Shutterstock</p>		
 <p>Figure 2 Source: © Jacob Lund/Shutterstock</p>		

Table 3

(Total for question = 4 marks)

Q9.

Kirsten is a shot putter. She has been training using free weights to improve her **strength**.

Kirsten recently changed her training plan.

Figure 3 shows Kirsten's old and new training plans for the chest press exercise.

Old training plan		New training plan	
Method of training – Free weights		Method of training – Free weights	
Exercise	Chest press	Exercise	Chest press
Weight lifted	60 kg	Weight lifted	65 kg
Number of sets	3	Number of sets	3
Number of repetitions	6	Number of repetitions	6

Figure 3

Specificity and progressive overload are two principles of training.

Describe, using an **example** from **Figure 3**, how the principle of **progressive overload** has been applied to Kirsten's training plan.

(2)

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(Total for question = 2 marks)

Q10.

Lily is a volleyball player. For the last six weeks she has been taking part in a training programme aimed at improving her power.

The training programme involved completing anaerobic hill sprint sessions twice a week. Each session lasted for 20 minutes and Lily was working at a Rate of Perceived Exertion (RPE) of 12.

Using the F.I.T.T principles, the **frequency** of these sessions will now be increased to three times a week.

Analyse how the **other** F.I.T.T principles could be used to change Lily's training programme to further improve her power for volleyball matches.

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(Total for question = 6 marks)

Q11.

George is a 15-year-old athlete. He has taken part in the Cooper 12-minute run. His result was **2400 m**.

Table 1 shows the normative test data for the Cooper 12-minute run.

Age	Excellent	Above average	Average	Below average	Poor
13–14	>2700m	2400–2700m	2200–2399m	2100–2199m	<2100m
15–16	>2800m	2500–2800m	2300–2499m	2200–2299m	<2200m
17–19	>3000m	2700–3000m	2500–2699m	2300–2499m	<2300m
20–29	>2800m	2400–2800m	2200–2399m	1600–2199m	<1600m

Table 1

State the component of fitness tested by the Cooper 12-minute run.

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(Total for question = 1 mark)

Q12.

George plays hockey and wants to use two different training methods to improve his aerobic endurance.

George is highly motivated to improve his aerobic endurance.

State **two** examples of how George may be intrinsically motivated to take part in aerobic training.

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(1)

2
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(1)

(Total for question = 2 marks)

Q13.

Lewis has been training to improve his speed.

His coach has used the **FITT principles** to change Lewis's training plan so that progressive overload is occurring.

Figure 1 shows Lewis's old training plan and new training plan.

Old training plan		New training plan	
Method of training	Sprint training	Method of training	Sprint training
Training days	Tuesday and Thursday	Training days	Sunday, Tuesday and Thursday
Session length	15 minutes	Session length	15 minutes
Session content	10 x 40 m sprints with 1 minute of rest between each sprint	Session content	10 x 40 m sprints with 1 minute of rest between each sprint

Figure 1

State **two** changes the coach could make to the session content section in **Figure 1** to make sure progressive overload occurs.

(2)

- 1
- 2

(Total for question = 2 marks)

Q14.

Jenny plays cricket. Jenny has been training to increase her power.
Jenny also completes the vertical jump test to measure her power.

Explain **one** reason why the vertical jump test would be a more valid test for a cricketer than a swimmer.

(2)

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(Total for question = 2 marks)

Q15.

Explain **one** reason why the 30 metre flying sprint would also be an appropriate fitness test for a footballer.

(2)

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(Total for question = 2 marks)

Q16.

Jenny cools down after every training session.

Explain **two** reasons for cooling down after a training session.

(4)

1

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(Total for question = 4 marks)

Q17.

Lionel is training to improve his muscular strength and speed.

Table 4 shows two weeks of Lionel's training programme.

Week	Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	Weights at 60% 1RM 3 sets × 8 reps	Rest day	Resistance drills	Rest day	Weights at 60% 1RM 3 sets × 8 reps	Rest day	Resistance drills
2	Weights at 60% 1RM 3 sets × 8 reps	Resistance drills	Rest day	Weights at 70% 1RM 3 sets × 6 reps	Resistance drills	Rest day	Weights at 70% 1RM 3 sets × 6 reps

Table 4

Explain **two** additional principles of training that Lionel is applying in his training programme.

(4)

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(Total for question = 4 marks)

Q18.

Technology is often used in fitness testing.

Evaluate the use of technology when carrying out the **30 metre sprint test**.

(6)

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(Total for question = 6 marks)

