COMPONENTS OF FITNESS (1.2A)

What do I need to know?	How do I feel about this?		
	Confident	Average	Unsure
For each component: • Know the definition • Be able to apply practical examples where this component is useful in sport. • Know suitable tests.			
Cardiovascular endurance / stamina			
Muscular endurance			
Speed			
Strength			
Power			
Flexibility			
Agility			
Balance			
Coordination			
Reaction time			
Be able to collect and use data relating to the components of fitness.			

COMPONENTS OF FITNESS

For each component give the defition, a sporting example and any suitable tests.

Cardiovascular endurance / stamina

Definition:

……

Sporting examples:

……

Suitable tests:

……

Muscular endurance
Definition:

……

Sporting examples:

……

Suitable tests:

……

Speed
Definition:

……

Sporting examples:

……

Suitable tests:

……

Strength
Definition:

……

Sporting examples:

……

Suitable tests:

……

Power
Definition:

……

Sporting examples:

……

Suitable tests:

……

Flexibility
Definition:

……

Sporting examples:

……

Suitable tests:

……

Agility
Definition:

……

Sporting examples:

……

Suitable tests:

……

Balance
Definition:

……

Sporting examples:

……

Suitable tests:

……

Co-ordination
Definition:

……

Sporting examples:

……

Suitable tests:

……

Reaction Time
Definition:

……

Sporting examples:

……

Suitable tests:

……

COMPONENTS OF FITNESS EXAM QUESTIONS

Answer **all** the questions.

1. Which one of the following is a suitable test for flexibility?

(a) 30 metre sprint test ☐

(b) Sit and reach test ☐

(c) Grip dynamometer test ☐

(d) Sit-up test ☐

[1]

2. Flexibility is a component of fitness.

Identify **four** other components of fitness.

1

2

3

4

---

[4]

3. Identify a suitable test that can be used to assess the stamina of a marathon runner.

---

[1]

4. Muscular endurance is a component of fitness.
Which one of the following best describes a good level of muscular endurance?

(a) To be able to run fast over 20 metres ☐

(b) To be able to keep lifting a weight without tiring too soon ☐

(c) To be able to stretch down to the floor with straight legs ☐

(d) To be able to lift a very heavy weight once ☐

[1]

5. Using practical examples, describe why speed **and** strength are important components of fitness for physical activity.
Speed

Strength

---

[4]

6. Which one of the following is a suitable test for measuring strength?

(a) The 400 metre race test ☐

(b) The sit and reach test ☐

(c) The arm wrestling test ☐

(d) The grip dynamometer test ☐

[1]

7. Which one of the following is the best example of an activity that requires cardiovascular endurance?

(a) To be able to reach for things effectively without losing balance ☐

(b) To be able to pick up a heavy object without straining yourself ☐

(c) To be able to get a job done quickly without making mistakes ☐

(d) To be able to carry out a repetitive task without tiring easily ☐

[1]

8. The 30-metre sprint fitness test is used as a test of speed. Explain why a table tennis coach is unlikely to use this test to measure his player's speeds.

_ _

_ _

_ _

_ _

_ _

[1]

END OF QUESTION PAPER

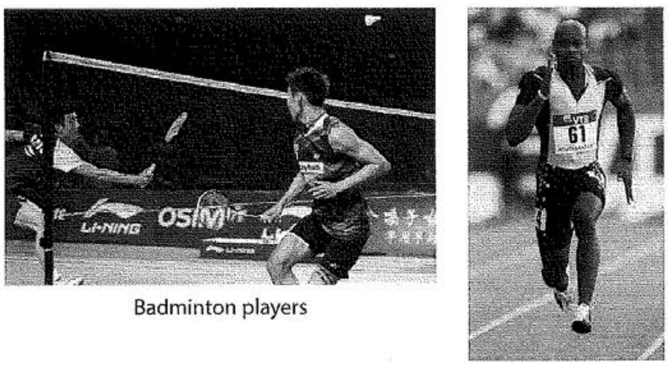
9. Imran plays for the school football team. At the start of the season the team undergo a series of fitness tests. In the table below:

- Tick the most relevant test for a football player (not a goal keeper).
- Explain why this is the most relevant test to Imran.

	Tick most relevant fitness test for football player	Explanation why this fitness test is relevant to football player
Illinois Agility Run		
Hand grip strength test		
Standing Stork test		

[2]

10. Discuss the relevant importance of agility and reaction time for the performers competing in the types of activity shown in Figure 7.



Badminton players

400m runner

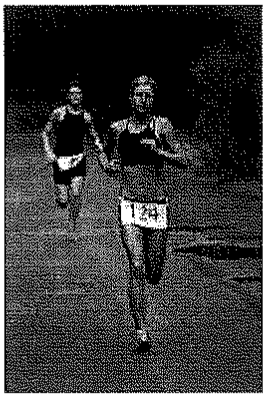
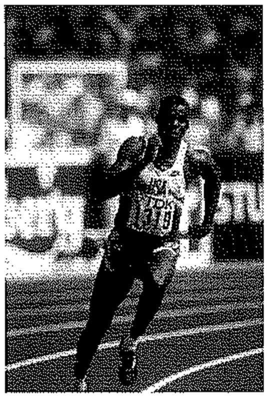
Figure 7

---

[4]

11. Fitness requirements vary for different activities. The performers in figure 3 and 4 need power, muscular endurance, strength and cardiovascular fitness for their activity, but the importance of each varies.

- In the table below identify the two most important components for the performer (select from the options above) [4]
- Explain how your first chosen components is used in his / her activity. [2]

	 **Figure 3** Long Distance Runner	 **Figure 4** Sprinter
Important component used by performer	**Choice 1**	**Choice 1**
Important component used by performer	**Choice 2**	**Choice 2**

---

[6]

APPLYING THE PRINCIPLES OF TRAINING (1.2B)

What do I need to know?	How do I feel about this?		
	Confident	Average	Unsure
Know the definitions for the principles of training and apply them to exercise programmes: (specificity, overload, progression and reversibility).			
Know the definitions for FITT and be able to apply them to exercise programmes: • Frequency • Intensity • Time • Type			
Know different types of training, definitions and examples of: • Continuous • Fartlek • Interval – Circuit training – Weight training – Plyometric – High intensity interval training			
Understand the key components of a warm up and be able to apply examples: • Pulse raising • Mobility • Stretching • Dynamic movement • Skill rehearsal			
Know the benefits of a warm up including: • Warming up muscles / preparing body for activity • Body temperature • Heart rate • Flexibility of muscles and joints • Pliability of ligaments and tendons • Blood flow of oxygen to muscles • Speed of muscle contractions			
Understand the key components of a cool down and be able to apply examples: • Low intensity exercise • Stretching			
Know the benefits of a cool down including: • Helps the body transition back to resting state • Gradually lowers heart rate • Gradually lowers temperature • Circulates blood and oxygen • Gradually reduces breathing rate • Removal of waste products such as lactic acid • Reduce the risk of muscle soreness and stiffness • Aids recovery by stretching muscles			

PRINCIPLES OF TRAINING

Give the definitions of the principles of training and give an example for each.

Remember: when explaining what each principle is do not repeat the word. Use the words in brackets instead.

Specificity (relevant)

Definition:

e.g. specificity means the training is relevant to the goal.

……

Example:

e.g. if the goal is to run a marathon the training should be aerobically based to improve stamina.

……

Overload (harder than normal)

Definition:

……

Example:

……

Progression (gradually increasing)

Definition:

……

Example:

……

Reversibility (deteriorate)

Definition:

……

Example:

……

FITT

Explain what each part of the 'FITT' principle means.

Remember: when explaining what part, do not repeat the word. Use the words in brackets instead.

Frequency (how often)

Explain what it means:

e.g. frequency means how often in the training programme activity will be completed.

……

Example:

e.g. when training for a marathon the athlete will train four times a week for an hour.

……

Intensity (how hard)

Explain what it means:

……

Example:

……

Time (how long)

Explain what it means:

……

Example:

……

Type (what kind)

Explain what it means:

……

Example:

……

TYPES OF TRAINING

Explain each type of training and give a suitable activity.

Continuous training

Describe

……

Example:

……

Fartlek training

Describe

……

Example:

……

Interval training

Describe

……

Example:

……

Circuit training

Describe

……

Example:

……

Plyometric training
Describe

……

Example:

……

Weight training
Describe

……

Example:

……

High intensity interval training
Describe

……

Example:

……

WARMING UP

Give an example for each component of the warm up.

Pulse raising
……

Mobility
……

Stretching
……

Dynamic movement
……

Skill rehearsal
……

WARMING UP BENEFITS

- Warming up muscles / preparing body for activity
- Body temperature
- Heart rate increases
- Flexibility of muscles and joints increases
- Pliability of ligaments and tendons increases
- Blood flow is diverted to working muscles
- Speed of muscle contractions increases

COOL DOWN

Give an example for each component of the cool down:

Low intensity exercise

……

Stretching

……

COOLING DOWN BENEFITS

- Helps the body transition back to resting state
- Gradually lowers heart rate
- Gradually lowers temperature
- Circulates blood and oxygen
- Gradually reduces breathing rate
- Removal of waste products such as lactic acid
- Reduce the risk of muscle soreness and stiffness
- Aids recovery by stretching muscles

APPLYING THE PRINCIPLES OF TRAINING EXAM QUESTIONS

Answer **all** the questions.

1. Footballers will often use jogging as a pulse raiser and stretch various muscles to increase flexibility.
Other than pulse raising and stretching, complete **Table 1** below identifying **two** other key components of a warm up, giving a practical example for each component.

Table 1

Warm up component	Practical example
1.....	.....
2.....	.....

[2]

2. Give **two** examples of cool down activities and give **four** reasons why a cool down is important following physical activities.
Example of cool down activity

Example of cool down activity

Reason for cool down

Reason for cool down

Reason for cool down

Reason for cool down

[6]

3. Leon has just taken part in a rugby match and needs to complete a cool down.

Complete **Table 1** below by:
(i) identifying the missing component of a cool down
(ii) describing the missing cool down activity
(iii) describing the physical benefit of the cool down activity.

Table 1

Component of cool down	Description of cool down activity	Physical benefit
(i)	light jogging around the rugby pitch	(iii)
stretching	(ii)	promotes recovery of muscles for next rugby match

[3]

4. Give a practical example of a cool down activity and explain why a cool down is important after exercise.

[4]

5. Which one of the following best describes the importance of the cool down following physical exercise?

(a) It helps to cope with failure in a sports competition ☐

(b) It lowers the temperature of the body more quickly ☐

(c) It repairs muscle damage ☐

(d) It speeds the removal of lactic acid ☐

[1]

6. Explain why it is important to cool down following physical activity.

---

[4]

7. Which **one** of the following practical examples is **TRUE**?
Put a tick (✔) in the box next to the correct answer.

(A) Concussion is a hazard when a gymnast falls after their vault ☐

(B) Overload is training too hard in an exercise class ☐

(C) A tennis serve is an example of circumduction at the elbow joint ☐

(D) Heading the ball in football is an example of a 2nd class lever ☐

(E) Abduction is a swimmer moving their arms outwards during the breast stroke ☐

(F) Cooling down after a basketball match prevents the build-up of lactic acid ☐

[1]

8. Progression is an important principle of fitness training.

Which one of the following shows the principle of progression?

(a) Doing more repetitions of the same weight in strength training ☐

(b) Making sure you take enough rest intervals in circuit training ☐

(c) Varying the types of training you follow in interval training ☐

(d) Making sure the training is specific in plyometric training ☐

[1]

9. Describe an exercise programme which includes the training principles of:

Overload
Specificity
Progression
Reversibility

……

……

……

……

[6]

10. Describe two features of circuit training as a method of training.
How would you use the fitness principles of overload, specificity and progression when planning circuit training?

[5]

11. Which one of the following best describes the training principle of reversibility?

(a) Fitness can deteriorate if training stops ☐

(b) If a programme is reversed fitness will improve ☐

(c) Variety of training is important to relieve tedium ☐

(d) Training should always be progressively more difficult ☐

[1]

12. Which **one** of the following are the correct elements of FITT?
Put a tick (□) in the box next to the correct answer.

(A) Frequency, Intensity, Time and Tedium □

(B) Frequency, Interval, Type and Time □

(C) Frequency, Intensity, Type and Tedium □

(D) Frequency, Intensity, Time and Type □

[1]

13. Which one of the following identifies the FITT principle?

(a) Frequency, Intensity, Type and Tapering □

(b) Frequency, Improvement, Type and Time □

(c) Frequency, Improvement, Talent and Time □

(d) Frequency, Intensity, Time and Type □

[1]

14. Frequency is one of the FITT principles for training effectively.

Which one of the following is an example of the frequency aspect of the FITT principle?

(a) Training at 70% of maximum heart rate □

(b) Training three times a week □

(c) Training with few rest intervals □

(d) Training by using a variety of methods □

[1]

15. Use **two** words from the box below to complete the description of plyometrics.

Plyometric exercises consist of ..... and .....

jogging	sprinting	bounding	flexing	frequency
hopping	intensity	extending	stretching	weight training

[1]

16. Intensity is one of the elements of the FITT Principle.

Identify the other **three** elements of the FITT Principle.

1)

---

2)

---

3)

---

[3]

17. Outline what is meant by High Intensity Interval Training (HIIT).

---

[1]

18. The SMART Principle refers to effective goal setting in physical activities.

Which one of the following does SMART represent?

(a) Special; Meaningful; Achievable; Realistic; Tedium ☐

(b) Specific; Measurable; Achievable; Realistic; Time-phased ☐

(c) Sustainable; Measurable; Agreed; Recorded; Time-phased ☐

(d) Sensible; Meaningful; Agreed; Recorded; Tedium ☐

[1]

19. Which one of the following is the best example of goal setting to optimise performance?

(a) To focus on one thing at a time when training for a marathon ☐

(b) Setting a target to score 15 goals in half a season in hockey ☐

(c) Playing each game at a time and adjusting your hopes and ambitions as you go along ☐

(d) The coach of an athlete promising a financial bonus if the athlete wins the next race ☐

[1]

20. 'Type' is one of the components of the FITT principle of training. High Intensity Interval Training is an example of a 'type' of training.

Give **two** other practical examples of 'type' in personal exercise programmes and assess **two** ways in which applying this principle might help someone who is carrying out this programme.

[4]

21. Which one of the following best describes the fartlek training method?

(a) A circuit training method that improves strength and flexibility ☐

(b) A continuous training method that improves speed and endurance ☐

(c) A weight training method that improves strength and power ☐

(d) A flexibility training method that improves stretching and endurance ☐

[1]

22. Which one of the following is **not** an example of continuous training?

(a) Jogging around an athletics track five times ☐

(b) Stretching one muscle group for over five minutes ☐

(c) Swimming 20 lengths of a swimming pool ☐

(d) Cycling five miles without stopping ☐

[1]

23. Compare continuous training and fartlek training.

[2]

24. Which one of the following training methods is mainly concerned with developing power?

(a) Fartlek ☐

(b) Plyometrics ☐

(c) Circuits ☐

(d) Interval ☐

[1]

25. Describe fartlek training and identify two ways it can improve fitness.

[4]

26. Describe circuit training as a method of fitness training.

[4]

27. Which one of the following is the best method of exercise to improve cardiovascular endurance?

(a) Yoga ☐

(b) Spin ☐

(c) Pilates ☐

(d) Circuit training ☐

[1]

28. Which one of the following best describes circuit training?

(a) Travelling to different venues to train ☐

(b) Training using the perimeter of the games pitch for running ☐

(c) A series of exercises or skill activities which are repeated ☐

(d) Exercises that are aerobic and involve dance movements ☐

[1]

29. Which one of the following is a good description of plyometrics as a type of training?

(a) A series of bounding, hopping and jumping movements ☐

(b) A mixture of aerobic and anaerobic training methods ☐

(c) Long distance running and walking with very little rest ☐

(d) Short sharp pliability exercises with intervals of rest and work ☐

[1]

END OF QUESTION PAPER

PREVENTING INJURY IN PHYSICAL ACTIVITY AND TRAINING (1.3C)

What do I need to know?	How do I feel about this?		
	Confident	Average	Unsure
Understand how the risk of injury in sport and physical activity can be minimised and be able to apply examples: • Personal protective equipment • Correct clothing / footwear • Appropriate level of competition • Use of warm up and cool down			
Know potential hazards in a range of physical activity and sports in a range of settings including: • Sportshall • Fitness centre • Playing field • Outdoor artificial area • Swimming pool			

MINIMISING RISK

A risk is how likely it is harm will be caused by a hazard.

Give an example of each of the following making sure you refer to a practical example:

Personal protective equipment

……

Correct clothing / footwear

……

Appropriate level of competition

……

Use of warm up and cool down

……

HAZARDS

A hazard is anything that can cause harm.

Give an example of hazards that can be found in the following places:

Sports hall

……

……

Fitness Centre

……

……

Playing field

……

……

Outdoor artificial area

……

……

Swimming pool

……

……

MINIMISING RISK AND INJURY IN PHYSICAL ACTIVITY EXAM QUESTIONS

Answer **all** the questions.

1. Describe **two** potential hazards that might be found in an artificial outdoor area and suggest a way to reduce the risk of each hazard.

Hazard

Way to reduce risk

Hazard

Way to reduce risk

---

[4]

2. Using practical examples, explain how a personal trainer might reduce the risk of injury to a participant when delivering a training session in a fitness centre.

How could the general health, fitness and wellbeing of a participant influence their risk of injury?

---

[6]

3. Which one of the following is an example of minimising risks in a leisure centre gymnasium?

(a) Let someone else work on the equipment after 20 minutes ☐

(b) Always work at maximum effort ☐

(c) Wear a brightly coloured top when training ☐

(d) Store the weights away when you have finished ☐

[1]

4. Using a practical example, explain **one** way correct footwear can minimise the risk of injury in sport or physical activity.

---

[1]

5. Describe **four** potential hazards when playing on an outdoor tennis court.

1)

---

2)

---

3)

---

4)

---

[4]

6. Describe **four** examples of different personal protective equipment used in named physical activities.

1)

2)

3)

4)

[4]

7. Give **one** example of personal protective equipment that will help prevent injury in a physical activity.

[1]

8. Which one of the following is an example of an appropriate warm up activity?

(a) To do as many fast sprints as possible and then to mentally focus ☐

(b) To go for a light jog and then to stretch the main muscle groups ☐

(c) To wear a thick tracksuit and talk to your coach about the game ☐

(d) To do some stretching and then consume a warm drink before playing ☐

[1]

9. Which one of the following is a hazard in a swimming pool?

(a) Concussion of a swimmer after diving in ☐

(b) Lockers for your clothes and valuables are broken ☐

(c) Too much chlorine in the water ☐

(d) Cutting your foot on the way into the pool ☐

10. Which of the following is **not** a potential hazard to a performer?

(a) A faulty piece of apparatus in gymnastics ☐

(b) Concussion in a football game ☐

(c) A high level of chlorine in a swimming pool ☐

(d) Dog faeces on a rugby pitch ☐

[1]

11. Complete **Table 2** below by using an example to explain how a performer can minimise injury by lifting and carrying heavy sports equipment safely in a fitness centre.

Table 2

Prevention of injury	Example of how risk of injury can be minimised
Lifting and carrying equipment safely	

[1]

12. Give a practical example of a cool down activity and explain why a cool down is important after exercise.

---

[4]

END OF QUESTION PAPER