

Question 1 (3 Marks)

Describe - Provide characteristics and feature.

- types of training and training methods
 - aerobic, eg continuous, Fartlek, aerobic interval, circuit
 - anaerobic, eg anaerobic interval
 - flexibility, eg static, ballistic, PNF, dynamic
 - strength training, eg free/fixed weights, elastic, hydraulic
- assess the relevance of the types of training and training methods for a variety of sports by asking questions such as:
 - which types of training are best suited to different sports?
 - which training method(s) would be most appropriate? Why?
 - how would this training affect performance?

Aerobic Training (continuous, fartlek, aerobic interval, circuit)

Anaerobic Training (anaerobic Interval)

Flexibility Training (static, ballistic, PNF, dynamic)

Strength Training (free / fixed weights, elastic, hydraulic)

What type of training is best suited / most appropriate to different sports? (refer to booklet)

How can this training affect performance?

Aerobic training

Anaerobic training

Flexibility

Strength Training

Question 2 (5 Marks)

Compare - Show how things are similar or different

- energy systems
 - alactacid system (ATP/PC)
 - lactic acid system
 - aerobic system
- analyse each energy system by exploring:
 - source of fuel
 - efficiency of ATP production
 - duration that the system can operate
 - cause of fatigue
 - by-products of energy production
 - process and rate of recovery

(Remember to refer to your energy systems summary sheet completed in class)

ATP-CP

Lactic Acid System

Aerobic System

Question 3 (10 Marks)

Explain – Relate cause and effect, make the relationship between things evident, provide why and/or how

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| <ul style="list-style-type: none">• physiological adaptations in response to training<ul style="list-style-type: none">– resting heart rate– stroke volume and cardiac output– oxygen uptake and lung capacity– haemoglobin level– muscle hypertrophy– effect on fast/slow twitch muscle fibres | <ul style="list-style-type: none">• examine the relationship between the principles of training, physiological adaptations and improved performance |
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| <ul style="list-style-type: none">• principles of training<ul style="list-style-type: none">– progressive overload– specificity– reversibility– variety– training thresholds– warm up and cool down | <ul style="list-style-type: none">• analyse how the principles of training can be applied to both aerobic and resistance training |
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- Physiological adaptations in response to training

Resting hear rate (include how it improves performance)

Stroke volume and cardiac output (include how it improves performance)

Oxygen uptake and lung capacity (include how it improves performance)

Haemoglobin level (include how it improves performance)

Muscle hypertrophy (include how it improves performance)

Effect on fast/slow twitch muscle fibres (include how it improves performance)

What is the relationship between:

The Principles of Training on *Physiological adaptations* and **Improved performance**

- Principles of Training

Progressive overload (include aerobic and strength training examples)

Specificity (include aerobic and strength training examples)

Reversibility (include aerobic and strength training examples)

Variety (include aerobic and strength training examples)

Training thresholds (include aerobic and strength training examples)

Warm up and cool down (include aerobic and strength training examples)