



# **Health & Fitness/The Components of Fitness**

## **Mark Scheme**

**Q1.**

- i) Define the term Reaction Time. (1)

**Mark One** – The amount of time between the presentation of a stimulus and the onset of movement

- ii) Give one example of when a cricket player would use reaction time in a match. (1)

**Mark One** – When a batsman sees the ball come out of the bowlers hand he must react to the direction it is going in order to play a shot

**Accept other appropriate answers**

**Q2.** Flexibility is a component of fitness. Assess the importance of flexibility to the performance of a badminton player **(3 marks)**

**Mark One** – Flexibility is the range of motion of your joints or the ability of your joints to move freely

**Mark Two** – This is important for a player in badminton as it means they will have the flexibility in their legs to get low in order to play a drop shot

**Mark Three** – Therefore flexibility will have a positive effect on performance and result in more points won.

**Accept other appropriate answers**

**Q3.** Define the terms health and fitness **(2 marks)**

**Mark One** – Health is a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity

**Mark Two** – Fitness is the ability to meet the demands of the environment

Q4. Sienna is a gymnast. Her coach has asked her to work on her flexibility.

Evaluate how improving this component of fitness will impact Sienna's performance in gymnastics. **(3 marks)**

**Mark One** – Flexibility is the range of motion of your joints (or the ability of your joints to move freely)

**Mark Two** – Flexibility is vitally important in gymnastics due to the requirement to bend and stretch your limbs in various ways/gymnastics is based on aesthetics and stretching the limbs further will allow a greater aesthetic appreciation for those watching and judging

**Mark Three** – Therefore improved flexibility will increase her performance and give her a better chance of winning competitions

Q5. Toby is a 100m sprinter and he has been working on speed, cardiovascular fitness and flexibility. Evaluate the relative importance of each of these components of fitness in terms of their impact on Toby's performance as a 100m sprinter. (9 marks)

**A01** – Speed is the rate at which an individual can perform a movement or cover a distance

**A02** – Speed is of high importance to a 100m sprinter. It is relatively more important than both cardiovascular fitness and flexibility

**A03** – Improving speed will have a positive impact on Toby's performance as a 100m runner as his finishing time will decrease and he will have a greater chance of winning races. Toby should heavily prioritise improving his speed during his training. Interval training will help achieve this

**A01** – Cardiovascular fitness is the ability to exercise the whole body for long periods of time

**A02** – Cardiovascular fitness is not very important for a 100m sprinter. It relates to the fitness of the heart and lungs and it is relatively less important than both speed and flexibility

**A03** – This is because a 100m sprint lasts for a short period of time and requires anaerobic respiration and powerful movements. Training the cardiovascular system will improve aerobic respiration but not anaerobic respiration. However, having a base level of cardiovascular fitness might help Toby recover following races or heavy training sessions

**A01** – Flexibility is the range of motion of your joints or the ability of your joints to move freely

**A02** – Flexibility is quite important for a 100m sprinter. It is relatively more important than cardiovascular fitness but less important than speed

**A03** – Improving flexibility won't have a direct impact on Toby's performance as a 100m sprinter. However, being more flexible will prevent him from picking up injuries such as hamstring or quadricep strains. Staying fit and healthy will mean that he can spend more time training will ultimately mean that he is a faster athlete