



PE.PT10 Designing a Personal Exercise Programme: Applying FITT Over a Training Cycle

AQA 8582 · Calculators not allowed · about 50 minutes

Total Marks

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Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

- 1** Tick one box. Priya wants to improve her muscular strength for shot put. Which single training type is most appropriate to include in her programme?
- ☐ A) Continuous steady state running
 - ☐ B) Heavy resistance training with low repetitions
 - ☐ C) Long slow distance cycling
 - ☐ D) Static stretching only

(Total for Question 1 is 1 mark)

- 2** Identify which FITT component you would change first to increase training load safely over a six week block for a recreational runner trying to increase weekly mileage.

(Total for Question 2 is 1 mark)

- 3** State the FITT component that refers to the kind of exercise chosen, for example circuit training, swimming or sprint intervals, within a personal exercise programme for a named performer.

(Total for Question 3 is 1 mark)

- 4** Oliwia is training for a 5 km parkrun and currently runs three times per week. Explain one reason why she might increase session time rather than session intensity in week 2 of a six week plan.

(Total for Question 4 is 2 marks)

- 5 Kwame plans sessions to develop anaerobic power for rugby carries. State an appropriate duration for a single high intensity interval in his programme.

(Total for Question 5 is 1 mark)

- 6 Erin wants to use heart rate to monitor training intensity for aerobic conditioning. State one simple way she can estimate a training heart rate target without specialised testing.

(Total for Question 6 is 2 marks)

- 7 Tick one box. Yusuf is designing a strength phase where he will use progressive overload. Which variable below is NOT a valid method of progressive overload within the same training type?

- ☐ A) Increasing the load lifted each week
- ☐ B) Increasing the number of sets or repetitions
- ☐ C) Changing the sport from rugby to swimming mid phase
- ☐ D) Reducing rest time between sets

(Total for Question 7 is 1 mark)

- 8 Identify which FITT variable is most appropriate to adjust when a cyclist wants to improve aerobic endurance by making sessions more frequent but shorter in duration during a six week base phase.

(Total for Question 8 is 1 mark)

- 9 State an appropriate warm up activity to include at the start of a circuit training session for a school basketball player, giving the FITT component this activity relates to.

(Total for Question 9 is 1 mark)

- 10** Priya wants to develop power for her shot put over a six week microcycle. Explain two ways she could progress her resistance training sessions from week 2 to week 5 without changing the exercise type.

(Total for Question 10 is 3 marks)

- 11** A recreational netballer has a goal to improve aerobic fitness and plans to train three times per week. State two FITT changes she could make across a six week programme to increase aerobic stimulus while managing recovery.

(Total for Question 11 is 2 marks)

- 12** Describe a suitable progression in the 'time' and 'frequency' components of FITT for a beginner swimmer aiming to move from 20 minute sessions twice a week to a competitive base of 40 minute sessions three times a week over six weeks.

(Total for Question 12 is 3 marks)

- 13** Explain how Priya, the shot putter, should use the FITT principle to structure a single training week in week 4 of a six week power development plan, giving specific examples for each FITT component and justifying their inclusion.

(Total for Question 13 is 4 marks)

- 14** State two reasons why including scheduled recovery or tapering sessions in the final week before a competition is important when following a six week PEP aimed at peak performance.

(Total for Question 14 is 2 marks)

- 15** Design and justify a six week personal exercise programme for a named performer. Scenario: Noah, a 16 year old county-level 400 m runner, aims to improve his 400 m race time by increasing anaerobic speed endurance and running economy. Design a six week programme using FITT that shows clear week-to-week progression and at least one recovery strategy. In your answer apply FITT to Noah and make a judgement about how the programme will help him reach his goal.

(Total for Question 15 is 8 marks)

Mark scheme · PE.PT10 Designing a Personal Exercise Programme: Applying FITT Over a Training Cycle

Question 1

- **B1 B**
- **Answer: B (heavy resistance training with low repetitions)**

Question 2

- **B1 frequency**
- **Answer: Frequency**

Question 3

- **B1 type**
- **Answer: Type**

Question 4

- **B1 increasing time increases endurance gradually without large jumps in physiological stress, oe**
- **B1 this reduces injury risk and allows adaptation before increasing intensity later, oe**
- **Answer: Increasing session time raises endurance gradually with smaller increases in physiological stress, reducing injury risk and allowing adaptation before intensity is increased.**

Question 5

- **B1 10-30 seconds, oe**
- **Answer: About 10 to 30 seconds**

Question 6

- **B1 use a percentage of maximum heart rate (e.g. 60-80% of max), oe**
- **B1 estimate max heart rate as 220 minus age, oe**
- **Answer: Use a percentage of maximum heart rate, for example 60 to 80 % of max, estimating max heart rate as 220 minus age.**

Question 7

- **B1 C**
- **Answer: C (changing the sport from rugby to swimming mid phase)**

Question 8

- **B1 frequency**
- **Answer: Frequency**

Question 9

- **B1 dynamic mobility and light jogging, type**
- **Answer: Dynamic mobility exercises and light jogging, type**

Question 10

- **B1 increase load slightly each week while keeping low repetitions to increase strength and power, oe**
- **B1 reduce rest periods or include more explosive concentric effort to increase intensity and power output, oe**
- **B1 add an extra set or include plyometric movements with the same exercises to increase overall training stimulus, oe**
- **Answer: She could increase the load slightly each week while keeping low repetitions to build strength, reduce rest periods or emphasise explosive concentric actions to increase intensity and power, and add an extra set or include plyometric progressions with the same exercises to increase training stimulus.**

Question 11

- **B1** increase time per session (longer steady runs or continuous shuttles)
- **B1** adjust intensity to include one tempo session at moderate intensity and two easy sessions, oe
- **Answer: Increase time per session by lengthening one steady run or continuous shuttle session, and adjust intensity so one session is at tempo/moderate intensity while the others remain easy to allow recovery.**

Question 12

- **B1** gradually increase session time by about 5 minutes every week until 40 minutes is reached, oe
- **B1** add an extra short session around week 3 or 4 to move from two to three sessions, oe
- **B1** combine the increases so weekly volume increases progressively, allowing adaptation and including at least one lighter recovery session, oe
- **Answer: Increase session time by about 5 minutes each week until 40 minutes is reached, add the extra weekly session around week 3 or 4 to move from two to three sessions, and combine these changes so weekly volume increases progressively while keeping one session lighter for recovery.**

Question 13

- **B1** frequency: e.g. 3 strength/power sessions plus 1 technical session to balance overload and skill, with justification of recovery needs, oe
- **B1** intensity: e.g. heavy loads 85-95% 1RM for low reps or explosive 30-60% 1RM for power, justified for power development, oe
- **B1** time: e.g. 45-60 minute sessions to allow warm up, main lifts and plyometrics, justified to include necessary components, oe
- **B1** type: e.g. Olympic-style lifts, medicine ball throws and plyometrics plus technical throwing practice, justified as specific to shot put power and skill, oe
- **Answer: Frequency: three strength/power sessions and one technical throwing session to build power and maintain skill while allowing recovery. Intensity: use heavy loads for strength and explosive lighter loads for power (eg 85-95% 1RM for strength sets and 30-60% 1RM for explosive reps) to target force and rate of force development. Time: 45 to 60 minute sessions to include thorough warm up, main lifts, plyometrics and cool down. Type: Olympic-style lifts, medicine ball throws, plyometrics and technical shot put practice, selected because they transfer to the throwing action.**

Question 14

- **B1** to allow physiological systems to recover and repair, restoring performance capacity, oe
- **B1** to reduce fatigue so the performer can reach peak power or skill on competition day, oe
- **Answer: To allow physiological systems to recover and repair, restoring performance capacity, and to reduce fatigue so the performer can reach peak power or skill on competition day.**

Question 15

- **Level 3** (6-8): A well developed programme that applies FITT clearly to Noah with specific weekly progression across at least four weeks, includes an explicit recovery strategy, uses appropriate running-based sessions for anaerobic speed endurance and running economy, and gives a reasoned judgement linking the programme to improved 400 m performance.
- **Level 2** (3-5): A partially developed programme with some FITT application, evidence of week-to-week progression and a recovery strategy, but limited detail or weaker links made to how the programme improves 400 m performance.
- **Level 1** (1-2): A basic outline with minimal FITT detail, little or no progression shown and limited or no recovery strategy, with only a general link to 400 m performance.
- **Level 0** (0): No relevant content.
- **Indicative content:**
 - Frequency example: week 1 two quality sessions plus two easy runs and one technical session, progressing to week 6 with three quality sessions and two easy runs, showing planned increase in stimulus.
 - Intensity example: interval intensities such as 6x200 m at 95% race pace in week 2 progressing to 8x200 m at 95-100% in week 5, and tempo runs at threshold pace to improve economy.
 - Time example: session durations start shorter in week 1 (e.g. quality sessions 20-30 minutes of work) and increase volume gradually, ensuring weekly volume increases but includes a reduced volume taper in week 6 before key race.
 - Type example: sprint interval sessions for anaerobic endurance (e.g. 150-300 m repeats), tempo runs and fartlek for running economy, strength/power gym session once per week for sprinting mechanics, and technical work on running form.
 - Progression example: increase repetitions or sets weekly, or reduce rest slightly between repeats, or increase intensity while keeping volume similar to develop tolerance to race pace demands.
 - Recovery strategy: include an easy active recovery day, one full rest day per week, and a planned taper in week 6 with reduced volume and maintained intensity to peak for competition.
 - Judgement: explain how anaerobic interval overload and improved running economy sessions will delay lactate accumulation, improve speed endurance and make pace easier to hold over 400 m, supported by strength work and recovery to allow adaptation.
 - Safety and individualisation: note Noah's age and competition schedule, avoiding excessive weekly increases and ensuring sessions are tailored to his current fitness and training history.