KS4
BTEC Sport

Exam Details:

Exam Board: Pearsons (Edexcel)
BTEC Tech Award Level 1 / 2 in Sport

Exam consists of one paper:

Component 3: Developing fitness to improve other participants performance in sport and physical activity (40%)

(1hr 30mins)

BTEC SPORT - COMPONENT 3

Topic	Content	R	A	G
Components of fitness	Definitions (agility, balance, cardiovascular endurance (aerobic power) coordination, flexibility, muscular endurance, power/explosive strength (anaerobic power), reaction time, speed, strength (maximal, static, dynamic and explosive)			
Tests to measure components of fitness.	Sit and Reach/Calf muscle flexibility test/Shoulder flexibility test/MSFT/12 minute cooper run or swim/1 minute Sit-up test/ 1 minute Press up test/Yo-Yo test/Harvard step test/Timed plank test/Handgrip Dynamometer/One Rep Max/Standing Stork/Illinois/T-Test/Vertical Jump/Broad Jump/Alternate hand Wall Toss Test/Ruler Drop/30m sprint/30m Flying sprint/Y Balance test/Margaria-Kalamen power test/Stick flip coordination test/BMI/BIA/Waist to hip ratio.			
Test Protocols (procedures)	See tests above – can you write out the instructions for each test? (you will need to know the procedures/facilities/equipment needed for each test and the measurements.			
Reasons **for** fitness testing	Increase confidence/motivation/bench mark/shows strengths & weaknesses/help set training goals and programming etc.			
Limitations of fitness testing	Tests are often not sport specific. They do not replicate movements of activities. They do not replicate competitive conditions required in sports etc. Cost/group size/practicalities/environment/individuals			
Reliability and validity	Reliability = **Consistency and repeatability** of a fitness test or assessment. Can it be repeated under the same conditions every time. Validity = Is the test actually measuring that specific component of fitness, is it a **true reflection** of their ability?			
Methods of monitoring fitness – (**How** to test)	Heart rate/Calorie counting/Health questionnaires/screening/Blood Pressure/Heart Rate/diaries.			
Principles of Training SPORT SMARTER FITT	(SPORT) – Specific, Progressive overload (FITT), Reversibility, Tedium. You will need to understand all of the above and explain how the principles of training can be applied to improve fitness using a sporting example. SMARTER -Specific, Measurable, Achievable, Realistic, Time-Bound, Exciting, Recorded FITT - Frequency, Intensity, Time, Type.			
Types of Training	Define and explain each type of training. You will also need to understand which type of training improves each component of fitness and the advantages and disadvantages of each. Continuous/fartlek/weight/circuit/interval/plyometric/Static stretching (mobility)			
Calculating training zones	Definition of training thresholds. Calculate maximum heart rate. MHR = 220-age Calculate aerobic training zone = 60-80% of MHR Calculate anaerobic training zone = 80-90% of MHR			
Measuring training intensity	The Borg (6–20) Rating of Perceived Exertion (RPE) Scale o RPE x 10 = Heart Rate (HR). ● The relationship between RPE and heart rate where: RPE x 10 = HR (bpm). ● Calculate 1RM for strength and 15RM for muscular endurance. ● Technology to measure exercise intensity: o heart rate monitors o smart watches o apps.			
Prevention of injuries	Complete a warm up. Over training to avoid (too heavy weights). Appropriate footwear and clothing. Hydration. Correct technique etc.			
Structure of a training session	Warm up/fitness/skills/game/cool down			
Seasonal aspects	Training Cycle (Pre-season/competition (peak) season/post season)			
How do performers warm up?	Include: increasing intensity to raise heart rate, active/passive/dynamic stretching, proprioceptive neuromuscular facilitation (PNF) stretching and ensuring game specificity			
How do performers cool down?	Reducing heart rate and intensity, active recovery, ice baths, massage and stretching.			
Benefits of a warm up/cool down?	Reduce injury/mental and physical preparation/remove lactic acid/increase HR/prevent muscle soreness/increase body temperature/DOMS			
Short-term (immediate) effects of exercise	increased heart rates, tidal volume, temperature, production of waste products.			
Anaerobic and Aerobic exercise	Definition and equations of aerobic (with oxygen) and anaerobic (without oxygen). Sporting examples of aerobic and anaerobic exercise.			

The recovery process (cool down/diet/ice baths)	Cool down – reduce HR and breathing rate/stretch/removal of lactic acid. Diet – rehydrate and replace carbohydrates. Ice baths – to prevent DOMS			
Immediate effects of exercise	Increase heart rate/sweating/red face/increase in breathing – explain why.			
Short term effects of exercise	Tiredness/fatigue/light headness/ nausea/ aching – delay onset of muscle soreness (DOMS)/cramp.			
Long-term effects of exercise	To include bone density, increased elasticity of muscles, hypertrophy, improved energy systems, increased stroke volume, decreased resting heart rate, blood pressure, decreased breathing frequency, increased vital capacity.			
Definition of types of goals	Performance goals = personal performance/no social comparison Outcome goals = winning/final result			
Goal Setting	Why do we set goals? Focusing attention, improving effort, concentration and helping develop strategies for success. Short and Long term.			
Goal Setting	How do we set goals? (SMARTER – Specific, measurable, accepted, realistic, time bound, exciting, recorded).			
Provision for taking part in fitness training methods	• Public provision – advantages and disadvantages. ● Private provision – advantages and disadvantages. ● Voluntary provision – advantages and disadvantages • Public provision – advantages and disadvantages			
The effects of long-term fitness training on the body systems	Components of fitness have individual methods of training.			
Feedback	Intrinsic & extrinsic, why do we give performers feedback? Knowledge of results/ Knowledge of performance Positive/negative feedback.			
D Investigate fitness programming to improve fitness and sports performance	• Personal information to aid fitness training programme design • Fitness programme design • Motivational techniques for fitness programming			
Motivation	Intrinsic (from within) & Extrinsic (money/prizes/praise/achievements)			
Motivation	Definition of each type of motivation and sporting examples: Intrinsic Motivation Extrinsic Motivation			