OCR GCSE PE – Paper 1 Checklist with Definitions

1. Applied Anatomy & Physiology

1.1 The Skeletal System

■ Identify major bones of the body.

• Locate and name bones including cranium, vertebrae, scapula, clavicle, humerus, radius, ulna, ribs, pelvis, femur, tibia, fibula.

■ Functions of the skeleton (6).

• Support, protection, movement, structural shape, mineral storage, blood cell production.

1.2 Synovial Joints

■ Structure of a synovial joint.

• Cartilage, ligaments, tendons, synovial membrane, synovial fluid, joint capsule.

■ Types of joint & movements.

• Hinge & ball■and■socket; movements: flexion, extension, abduction, adduction, rotation, circumduction.

1.3 Muscular System

■ Major muscle groups.

• Deltoid, pectorals, trapezius, latissimus dorsi, abdominals, biceps, triceps, quadriceps, hamstrings, gastrocnemius, gluteals.

■ Antagonistic pairs.

• Agonist contracts, antagonist relaxes; fixators stabilise joints.

1.4 Respiratory System

■ Structure & pathway of air.

• Trachea → bronchi → bronchioles → alveoli; diaphragm/intercostals assist breathing.

■ Gas exchange.

• O■ diffuses into blood, CO■ diffuses out at alveoli.

1.5 Cardiovascular System

■ Blood vessels.

• Arteries (away), veins (towards, valves), capillaries (thin walls for diffusion).

■ Cardiac output equation.

• Q = HR × SV.

1.6 Aerobic & Anaerobic Exercise

■ Aerobic exercise.

• With oxygen; long duration, low intensity.

■ Anaerobic exercise.

• Without oxygen; short, high■intensity; produces lactic acid.

1.7 Effects of Exercise

■ Short■term effects.

- Increased HR, breathing rate, temperature, fatigue.

■ Long■term adaptations.

- Hypertrophy, lower resting HR, stronger bones, improved stamina.

1.8 Levers, Planes & Axes

■ Levers.

- 1st, 2nd, 3rd class levers—mechanical advantage & speed.

■ Planes.

- Sagittal, frontal, transverse.

■ Axes.

- Longitudinal, transverse, frontal.

2. Physical Training

2.1 Components of Fitness

■ Components of fitness.

- CV endurance, muscular endurance, strength, flexibility, speed, power, agility, balance, coordination, reaction time.

2.2 Principles of Training (SPOR & FITT)

■ SPOR principles.

- Specificity, Progressive overload, Reversibility, Tedium.

■ FITT.

- Frequency, Intensity, Time, Type.

2.3 Methods of Training

■ Methods of training.

- Continuous, fartlek, interval, circuit, weight, plyometrics, HIIT.

2.4 Optimising Training

■ Warm■up & cool■down.

- Warm-up prepares body; cool-down aids recovery.

■ Training thresholds & periodisation.

- Heart rate zones; structured planning cycles.

2.5 Preventing Injury

■ Injury prevention.

- Correct technique, hydration, progressive loading, safe environment.