Paper 1 and Paper 2 revision list

Paper 1 – Revision List

Skeletal System

Learners must:

- know the name and location of the following bones in the human body:
  - cranium
  - vertebrae
  - ribs
  - sternum
  - clavicle
  - scapula
  - pelvis
  - humerus
  - ulna
  - radius
  - carpals
  - metacarpals
  - phalanges
  - femur
  - patella
  - tibia
  - fibula
  - tarsals
  - metatarsals.

- understand and be able to apply examples of how the skeleton provides or allows:
  - support
  - posture
  - protection
  - movement
  - blood cell production
  - storage of minerals.

- know the definition of a synovial joint
- know the following hinge joints:
  - knee – articulating bones – femur, tibia
  - elbow – articulating bones – humerus, radius, ulna
- know the following ball and socket joints:
  - shoulder – articulating bones – humerus, scapula
  - hip – articulating bones – pelvis, femur.

Learners must:

- know the types of movement at hinge joints and be able to apply them to examples from physical activity/sport:
  - flexion
  - extension
- know the types of movement at ball and socket joints and be able to apply them to examples from physical activity/sport:
  - flexion
  - extension
  - rotation
  - abduction
  - adduction
  - circumduction.

- know the roles of:
  - ligament
  - cartilage
  - tendons.

Muscular System

Learners must:

- know the name and location of the following muscle groups in the human body and be able to apply their use to examples from physical activity/sport:
  - deltoid
  - trapezius
  - latissimus dorsi
  - pectorals
  - biceps
  - triceps
  - abdominals
  - quadriceps
  - hamstrings
  - gluteals
  - gastrocnemius.
- know the definitions and roles of the following and be able to apply them to examples from physical activity/sport:
  - agonist
  - antagonist
  - fixator
    - antagonistic muscle action.

Movement Analysis

Learners must:

- know the three classes of lever and their use in physical activity and sport:
  - 1st class
    - neck
  - 2nd class
    - ankle
  - 3rd class
    - elbow
- know the definition of mechanical advantage.
- know the location of the planes of movement in the body and their application to physical activity and sport:
  - frontal
  - transverse
  - sagittal
- know the location of the axes of rotation in the body and their application to physical activity and sport:
  - frontal
  - transverse
  - longitudinal.

Cardiovascular and Respiratory System:

- know the double-circulatory system (systemic and pulmonary)
- know the different types of blood vessel:
  - arteries
  - capillaries
  - veins
- understand the pathway of blood through the heart:
  - atria
  - ventricles
  - bicuspid, tricuspid and semilunar valves
  - septum and major blood vessels:
    - aorta
    - pulmonary artery
    - vena cava
    - pulmonary vein
- know the definitions of:
  - heart rate
  - stroke volume
  - cardiac output
- know the role of red blood cells.

- understand the pathway of air through the respiratory system:
  - mouth
  - nose
  - trachea
  - bronchi
  - bronchiole
  - alveoli
- know the role of respiratory muscles in breathing:
  - diaphragm
  - intercostals
- know the definitions of:
  - breathing rate
  - tidal volume
  - minute ventilation
- understand about alveoli as the site of gas exchange.

- know the definitions of:
  - aerobic exercise
  - anaerobic exercise
- be able to apply practical examples of aerobic and anaerobic activities in relation to intensity and duration.

Effects of exercise on the body

- understand the short-term effects of exercise on:
  - muscle temperature
  - heart rate, stroke volume, cardiac output
  - redistribution of blood flow during exercise
  - respiratory rate, tidal volume, minute ventilation
  - oxygen to the working muscles
  - lactic acid production
- be able to apply the effects to examples from physical activity/ sport
- be able to collect and use data relating to short-term effects of exercise.

- understand the long-term effects of exercise on:
  - bone density
  - hypertrophy of muscle
  - muscular strength
  - muscular endurance
  - resistance to fatigue
  - hypertrophy of the heart
  - resting heart rate and resting stroke volume
  - cardiac output
  - rate of recovery
  - aerobic capacity
  - respiratory muscles
  - tidal volume and minute volume during exercise
  - capilliarisation
- be able to apply the effects to examples from physical activity/ sport
- be able to collect and use data relating to long-term effects of exercise.

Components of Fitness

Know the following components of fitness:

- cardiovascular endurance/stamina
  - know the definition of cardiovascular endurance/stamina
  - be able to apply practical examples where this component is particularly important in physical activity and sport
  - know suitable tests for this component, including:
    - Cooper 12 minute run/walk test
    - multi-stage fitness test
- muscular endurance
  - know the definition of muscular endurance
  - be able to apply practical examples where this component is particularly important in physical activity and sport
  - know suitable tests for this component, including:
    - press-up test
    - sit-up test
- speed
  - know the definition of speed
  - be able to apply practical examples where this component is particularly important in physical activity and sport
  - know suitable tests for this component, including:
    - 30m sprint test
- strength
  - know the definition of strength
  - be able to apply practical examples of where this component is particularly important in physical activity and sport
  - know suitable tests for this component, including:
    - grip strength dynamometer test
    - 1 Repetition Maximum (RM)
- power
  - know the definition of power
  - be able to apply practical examples of where this component is particularly important in physical activity and sport
  - know suitable tests for this component, including:
    - 'standing jump' or 'vertical jump' tests
- flexibility
  - know the definition of flexibility
  - be able to apply practical examples of where this component is particularly important in physical activity and sport
  - know suitable tests for this component, including:
    - 'sit and reach' test
- agility
  - know the definition of agility
  - be able to apply practical examples of where this component is particularly important in physical activity and sport
  - know suitable tests for this component, including:
    - Illinois agility test
- balance
  - know the definition of balance
  - be able to apply practical examples of where this component is particularly important in physical activity and sport
  - know suitable tests for this component, including:
    - 'stork stand' test
- co-ordination
  - know the definition of co-ordination
  - be able to apply practical examples of where this component is particularly important in physical activity and sport
  - know suitable tests for this component, including:
    - 'wall throw' test
- reaction time
  - know the definition of reaction time
  - be able to apply practical examples of where this component is particularly important in physical activity and sport
  - know suitable tests for this component, including:
    - reaction time ruler test
- be able to collect and use data relating to the components of fitness.

Applying Principles of Training

- know the following definitions of principles of training and be able to apply them to personal exercise/training programmes:
  - specificity
  - overload
  - progression
  - reversibility.

- know the definition of the elements of FITT (Frequency, Intensity, Time, Type) and be able to apply these elements to personal exercise/training programmes
- know different types of training, definitions and examples of:
  - continuous
  - fartlek
  - interval
    - circuit training
    - weight training
    - plyometrics
    - HIIT (High Intensity Interval Training).
- understand the key components of a warm up and be able to apply examples:
  - pulse raising
  - mobility
  - stretching
  - dynamic movements
  - skill rehearsal

- know the physical benefits of a warm up, including effects on:
  - warming up muscles/preparing the body for physical activity
  - body temperature
  - heart rate
  - flexibility of muscles and joints
  - pliability of ligaments and tendons
  - blood flow and oxygen to muscles
  - the speed of muscle contraction
- understand the key components of a cool down and be able to apply examples:
  - low intensity exercise
  - stretching
- know the physical benefits of a cool down, including:
  - helps the body's transition back to a resting state
  - gradually lowers heart rate
  - gradually lowers temperature
  - circulates blood and oxygen
  - gradually reduces breathing rate
  - increases removal of waste products such as lactic acid
  - reduces the risk of muscle soreness and stiffness
  - aids recovery by stretching muscles.

Preventing Injury in and Physical Activity and Training.

- understand how the risk of injury in physical activity and sport can be minimised and be able to apply examples, including:
  - personal protective equipment
  - correct clothing/footwear
  - appropriate level of competition
  - lifting and carrying equipment safely
  - use of warm up and cool down
- know potential hazards in a range of physical activity and sport settings and be able to apply examples, including:
  - sports hall
  - fitness centre
  - playing field
  - artificial outdoor areas
  - swimming pool.

Paper 2

Socio-cultural influences:

be familiar with current trends in participation in physical activity and sport:
- using different sources (such as Sport England, National Governing Bodies (NGBs) and Department of Culture, Media and Sport (DCMS))
- of different social groups
- in different physical activities and sports.

- understand how different factors can affect participation, including:
  - age
  - gender
  - ethnicity
  - religion/culture
  - family
  - education
  - time/work commitments
  - cost/disposable income
  - disability
  - opportunity/access
  - discrimination
  - environment/climate
  - media coverage
  - role models
- understand strategies which can be used to improve participation:
  - promotion
  - provision
  - access
- be able to apply examples from physical activity/sport to participation issues.

Commercialisation of physical activity and sport

- understand the influence of the media on the commercialisation of physical activity and sport:
  - different types of media
    - social
    - internet
    - TV/visual
    - newspapers/magazines.
- know the meaning of commercialisation, including sport, sponsorship and the media (the golden triangle):
  - positive and negative effects of the media on commercialisation
  - be able to apply practical examples to these issues.
- understand the influence of sponsorship on the commercialisation of physical activity and sport:
  - positive and negative effects of sponsorship on commercialisation
  - be able to apply practical examples to the issue of sponsorship.

Ethical and socio-cultural issues in physical activity and sport

- know and understand:
  - the value of sportsmanship
  - the reasons for gamesmanship and deviance in sport.
- be able to apply practical examples to these concepts.

- know and understand the reasons why sports performers use drugs
- know the types of drugs and their effect on performance:
  - anabolic steroids
  - beta blockers
  - stimulants
- give practical examples of the use of these drugs in sport.
- know and understand the impact of drug use in sport:
  - on performers
  - on sport itself.

- know and understand the reasons for player violence
- give practical examples of violence in sport.

Sports psychology

- know the definition of motor skills
- understand and be able to apply examples of the characteristics of skilful movement:
  - efficiency
  - pre-determined
  - co-ordinated
  - fluent
  - aesthetic.

- know continua used in the classification of skills, including:
  - simple to complex skills (difficulty continuum)
  - open to closed skills (environmental continuum)
- be able to apply practical examples of skills for each continuum along with justification of their placement on both continua.

- understand and be able to apply examples of the use of goal setting:
  - for exercise/training adherence
  - to motivate performers
  - to improve and/or optimise performance
- understand the SMART principle of goal setting with practical examples (Specific, Measurable, Achievable, Recorded, Timed)
- be able to apply the SMART principle to improve and/or optimise performance.

to apply practical

  - mental rehearsal
  - selective attention
  - positive thinking.

- understand types of guidance, their advantages and disadvantages, and be able to apply practical examples to their use:
  - visual
  - verbal
  - manual
  - mechanical.

- understand types of feedback and be able to apply practical examples to their use:
  - intrinsic
  - extrinsic
  - knowledge of performance
  - knowledge of results
  - positive
  - negative.

Health, fitness and well-being

- know what is meant by health, fitness and well-being
- understand the different health benefits of physical activity and consequences of a sedentary lifestyle:
  - physical:
    - injury
    - coronary heart disease (CHD)
    - blood pressure
    - bone density
    - obesity
    - Type 2 diabetes
    - posture
    - fitness
  - emotional:
    - self-esteem/confidence
    - stress management
    - image
  - social:
    - friendship
    - belonging to a group
    - loneliness
- be able to apply the above to different age groups
- be able to respond to data about health, fitness and well-being

- know the definition of a balanced diet
- know the components of a balanced diet
  - carbohydrates
  - proteins
  - fats
  - minerals
  - vitamins
  - fibre
  - water and hydration
- understand the effect of diet and hydration on energy use in physical activity
- be able to apply practical examples from physical activity and sport to diet and hydration.