GCSE PE Challenge – Paper 1 (100)

1. **Name the articulating (moving) bones in the following joints [4]**
   Shoulder: Clavicle, Scapula & Humerus
   Knee: Femur & Tibia
   Elbow: Humerus, Radius & Ulna
   Hip: Pelvis & Femur

2. **Identify 5 Functions of the Skeleton [5]**
   Produce Red Blood Cells
   Support/Structure/Posture
   Protection
   Movement
   Store Minerals

3. **Identify 2 types of Joint & Example [2]**
   Hinge = Elbow/Knee
   Ball & Socket = Hip/Shoulder

4. **Name the 6 Ranges of Movement with directional arrows [6]**
   Rotation

   Circumduction

   Flexion

   Extension

   Adduction

   Abduction

5. **Identify a Role of a Tendon [1]**
   Connect muscle to bone
   Prevent overextension
   Gives stability/ support
   Apply the movement power

6. **Identify a Role of a Ligament [1]**
   Joins bone to bone
   Stabilises the joint
   Prevent extreme movements
   Prevents dislocations

7. **Name 11 Main Muscles [11]**
   Triceps
   Deltoid
   Biceps
   Trapezius
   Pectorals
   Quadriceps
   Gastrocnemius
   Abdominals
   Gluteals
   Hamstrings
   Latissimus Dorsi

8. **Name an Antagonistic Pair [1]**
   Bicep & Triceps
   Quadriceps & Hamstrings

9. **For each of the levers, identify their use in sport [3]**
   1st – Neck – header in football
   2nd – Ankle – jumping in basketball
   3rd – Elbow – throwing in netball

   1,2,3…FLE

10. **What are the 3 planes of movement and axis of rotation that match [6]**
    Sagittal Plane – Transverse Axis
    Transverse Plane – Longitudinal Axis
    Frontal Plane – Frontal Axis

11. **What are the 2 systems of the double circulatory system? [1]**
    Pulmonary System (Lungs)
    Systemic System (Body)

12. **What are the 3 different types of blood vessels? [3]**
    Arteries
    Veins
    Capillaries
    Arterioles
    Venules

13. **List the pathway of blood through the heart [5]**
    Pulmonary System (Lungs)
    Right ventricle – pulmonary artery - Lungs – pulmonary vein – left atrium →
    Systemic System (Body)
    Left ventricle – aorta – Muscles – vena cava – right atrium →

14. **What is the formula for cardiac output? [1]**
    Cardiac Output = Stroke Volume x Heart Rate

15. **Identify the role of blood cells [2]**
    White: fight infections

    Red: transport O2 and CO2

16. **Link the pathway of air through the respiratory system [2]**
    Nasal Passage
    Trachea
    Bronchi
    Bronchioles
    Alveoli
    Red Blood Cells

17. **Describe the differences between Aerobic & Anaerobic Exercise with practical examples [2]**

Aerobic	Anaerobic
Oxygen	No Oxygen
Low Intensity	High Intensity
Long Duration	Short Duration
Marathon Runner	Sprinter

18. Identify 3 Short Term Effects of Exercise [3]

Muscle Fatigue Vascular Shunt Mechanism
Increase Muscle Temp, Heart Rate, Stroke Volume
Increase Breathing Rate, Tidal & Minute Volume

19. Identify 3 Long Term Effects of Exercise [3]

Lower resting heart rate
Increase Lung Volume
Decrease in resting blood pressure
Increase Stroke Volume
Hypertrophy Muscles Stronger

20. Name 10 Components of Fitness [10]

Cardiovascular Endurance	Speed
Muscular Endurance	Agility
Muscular Strength	Balance
Flexibility	Reaction Time
Coordination	Power

21. Identify 5 Fitness Tests [5]

30m Sprint Test	Sit and Reach Test
12 Minute Cooper	Sit up Test
Bleep Test	Press up Test
Stork Test	Ruler Drop Test
Illinois Agility Test	Wall Throw Test
Vertical Jump	Standing Board Jump

Grip Strength Dynamometer

22. Identify the Training Principles – SPORT & FITT [2]

Specificity	Frequency
Progression	Intensity
Overload	Type
Reversibility	Time
Tedium	

23. Identify the 7 Training Methods [7]

Continuous	Fartlek
Plyometric	Interval
Circuit	Weight

High Intensity Interval Training (HIIT)

24. What are the 5 components of a warm up [5]

Pulse Raiser (Jogging)
Mobility
Dynamic Stretches
Dynamic Movements (sprints)
Sport Rehearsal (Skill/Drills)

25. Give 2 Reasons to Warm up [2]

To prepare for performance

Enables flexibility	Increase Body Temp
Reduce risk of injury	Mental Preparation
Increase Heart Rate	Increase breathing rate

Improve speed/strength of muscular contraction

26. Give 2 Reasons to Cool Down [2]

Speeds removal of lactic acid/waste products
Decrease Heart Rate/Blood Pressure
Prevents stiffness/soreness

Reduces risk of injury	Prevent feeling tired
Decrease Body Temp	Decrease breathing rate

27. Identify 2 effects of Lactic Acid on Performance [2]

Causes Fatigue/Tiredness
Causes Pain/Aching/Soreness
Stop activity/Decrease Performance

28. Identify 2 Hazards & 2 ways to Reduce Risks [2]

Litter	Clear/Check
Slippery	Dry/Correct Footwear
Weather	Clothing/Go Indoors
Equipment	Remove/Check/Maintain
Surface	Check/Maintain