

GCSE P.E. questions and mark schemes

1 a Applied Anatomy and Physiology

1. Which of one of the following is NOT a function of the skeleton?
 - A. Allows movement at a joint
 - B. Gives the body shape
 - C. Pulls tendons
 - D. Provides a point of attachment for muscles

2. Which one of the following is NOT a function of the skeleton?
 - A. Produces red blood cells
 - B. Stores calcium
 - C. Protects organs
 - D. Produces hormones

3. Which one of the following is NOT a function of the skeleton?
 - A. Stores fat
 - B. Allows movement
 - C. Gives shape
 - D. Supports organs

4. Which one of the following correctly identifies the part of the skeleton that produces red blood cells?
 - A. Flat bones
 - B. Vertebrae
 - C. Long bones
 - D. Short bones

5. Which one of the following parts of a synovial joint produces the synovial fluid?
 - A. Bursa
 - B. Cartilage
 - C. Synovial membrane
 - D. Ligaments

6. Which one of the following parts of a synovial joint is a fluid-filled bag?
 - A. Capsule
 - B. Bursa
 - C. Synovial membrane
 - D. Ligaments

7. Which one of the following correctly identifies the function of the articular cartilage in a synovial joint?
 - A. Attaches bone to muscle
 - B. Reduces friction between bones
 - C. Prevents dislocations
 - D. Produces synovial fluid

8. Which one of the following is NOT a function of cartilage?
 - A. Absorbs shocks
 - B. Lubricates the joint
 - C. Protects the ends of bones
 - D. Reduces friction

9. Which one of the following facts is NOT true about the elbow joint?
 - A. Contains three bones
 - B. Works as a second-class lever system
 - C. The triceps causes extension
 - D. Is a hinge joint

10. Which one of the following is correct about the elbow joint?
- A. Extension occurs due to the action of the triceps
 - B. Flexion occurs due to action of the triceps
 - C. Hyperextension occurs due to action of the triceps
 - D. Extension occurs due to action of the biceps
11. Which one of the following is NOT correct about the elbow joint?
- A. Formed from radius, ulna and humerus
 - B. Moved by triceps and biceps muscles
 - C. Type of ball and socket joint
 - D. Moves through the transverse plane
12. When the biceps contract, which one of the following is correct?
- A. The triceps also contracts
 - B. The biceps act as an antagonist muscle
 - C. Extension occurs
 - D. The angle at the hinge joint decreases
13. Which one of the following facts is NOT true about the shoulder joint?
- A. Contains three bones
 - B. Works as a third-class lever system
 - C. The deltoid causes abduction
 - D. Is a ball and socket joint
14. Which one of the following is correct about the shoulder joint?
- A. Abduction occurs due to the action of the triceps
 - B. Adduction occurs due to action of the latissimus dorsi
 - C. Flexion occurs due to action of the deltoid
 - D. Extension occurs due to action of the pectorals
15. Which one of the following is NOT correct about the shoulder joint?
- A. Formed from clavicle, scapula and humerus
 - B. Formed from the clavicle and humerus
 - C. Formed from the humerus and scapula
 - D. Formed from the clavicle and scapula
16. Which one of the following is NOT correct about the shoulder joint?
- A. The triceps contracts to cause flexion
 - B. The rotator cuff muscles act as an agonist muscle during rotation
 - C. Extension occurs when the latissimus dorsi contracts
 - D. Abduction is when the arm moves away from the body
17. Which one of the following is NOT correct about the shoulder joint?
- A. It is a synovial joint
 - B. It is formed from three bones
 - C. It is a ball and socket joint
 - D. It is easily dislocated
18. Which one of the following facts is NOT true about the knee joint?
- A. Contains two bones
 - B. Works as a third-class lever system
 - C. The quadriceps cause flexion
 - D. Is a hinge joint
19. Which one of the following is correct about the knee joint?
- A. Extension occurs due to the action of the quadriceps
 - B. Flexion occurs due to action of the quadriceps
 - C. Extension occurs due to action of the hamstrings

- D. Flexion occurs due to action of the gluteals
20. Which one of the following is correct about the knee joint?
- A. Formed from tibia, fibula and femur
 - B. Formed from tibia and femur
 - C. Formed from patella, fibula and femur
 - D. Formed from tibia, patella and femur
21. Which one of the following is correct about the knee joint?
- A. Formed from tibia, fibula and femur
 - B. Moved by quadriceps and hamstring muscles
 - C. Type of ball and socket joint
 - D. Moves through the longitudinal plane
22. When the quadriceps contract, which one of the following is correct?
- A. The hamstrings also contract
 - B. The quadriceps act as an antagonist muscle
 - C. Extension occurs
 - D. The angle at the hinge joint decreases
23. Which one of the following facts is correct about the hip joint?
- A. Contains two bones
 - B. Works as a first-class lever system
 - C. The gluteals causes flexion
 - D. Is a hinge joint
24. Which one of the following is correct about the hip joint?
- A. Extension occurs due to the action of the quadriceps
 - B. Flexion occurs due to action of the quadriceps
 - C. Extension occurs due to action of the gluteals
 - D. Flexion occurs due to action of the hamstrings
25. Which one of the following is correct about the hip joint?
- A. Formed from tibia and femur
 - B. Moved by gluteal and hamstring muscles
 - C. Type of ball and socket joint
 - D. Moves through the longitudinal axis
26. When the gluteals contract, which one of the following is correct?
- A. The hip flexors also contract
 - B. The quadriceps act as an antagonist muscle
 - C. Extension occurs
 - D. The angle at the hinge joint decreases
27. Which one of the following facts is NOT true about the ankle joint?
- A. Contains two bones
 - B. Works as a second-class lever system
 - C. The gastrocnemius causes plantar flexion
 - D. Is a hinge joint
28. Which one of the following is correct about the ankle joint?
- A. Dorsi-flexion occurs due to the action of the gastrocnemius
 - B. Plantar flexion occurs due to action of the gastrocnemius
 - C. Extension occurs due to action of the tibialis anterior
 - D. Flexion occurs due to action of the tibialis anterior
29. Which one of the following is correct about the ankle joint?
- A. Formed from tibia and talus
 - B. Moved by tibialis anterior and gastrocnemius muscles
 - C. Type of ball and socket joint

- D. Moves through the transverse plane
30. When the gastrocnemius contracts, which one of the following is correct?
- A. The tibialis anterior also contracts
 - B. The gastrocnemius acts as an agonist muscle
 - C. Extension occurs
 - D. The angle at the hinge joint decreases

1 b Structure and Function of the Cardio-Respiratory System

5. Which one of the following describes the correct order of structures that air passes through before it enters the lungs?
- A. Mouth, bronchi; bronchioles; trachea
 - B. Mouth, trachea, bronchioles, bronchi,
 - C. Mouth, trachea, bronchi, bronchioles
 - D. Mouth, bronchioles, trachea, bronchi
6. Which one of the following is NOT a characteristic of bronchioles?
- A. Have rings of cartilage
 - B. Have cilia presence
 - C. Open into alveoli
 - D. Less than 1 mm in diameter
7. Which one of the following is NOT a characteristic of alveoli?
- A. Very thin membranes
 - B. Layer of moisture
 - C. Rich blood supply
 - D. Kept open by rings of cartilage
8. Which one of the following statements about gas exchange in alveoli is NOT true?
- A. Oxygen moves into blood down a concentration gradient
 - B. Carbon dioxide moves into alveoli down a concentration gradient
 - C. Oxygen moves into alveoli down a concentration gradient
 - D. Carbon dioxide moves out of blood down a concentration gradient
9. Which one of the following factors assist the process of diffusion?
- A. The large gap between alveoli and blood capillaries
 - B. The thick membranes
 - C. The layer of moisture
 - D. The lack of a good blood supply
10. Which one of the following is NOT a factor that increases the rate of gas exchange in alveoli?
- A. Thin membranes
 - B. Large surface area
 - C. Rich blood supply
 - D. Long distance between capillaries and alveoli
11. Which one of the following is the main way that oxygen is carried by haemoglobin in the blood?
- A. As oxyhaemoglobin
 - B. As carboxyhaemoglobin
 - C. As carbaminohaemoglobin
 - D. As oxymyoglobin
12. Which one of the following is the correct sequence of events during normal breathing?
- A. Diaphragm relaxes; increased volume in chest; increased pressure in lungs; air sucked in
 - B. Diaphragm contracts; increased volume in chest; reduced pressure in lungs; air sucked in

- C. Diaphragm relaxes; increased volume in chest; reduced pressure in lungs; air sucked in
D. Diaphragm contracts; decreased volume in chest; reduced pressure in lungs; air sucked in
13. Which one of the following is the correct sequence of events during expiration at rest?
A. Diaphragm relaxes; increased volume in chest; reduced pressure in lungs; air forced out
B. Diaphragm contracts; decreased volume in chest; increased pressure in lungs; air forced out
C. Diaphragm relaxes; decreased volume in chest; increased pressure in lungs; air forced out
D. Diaphragm contracts; increased volume in chest; reduced pressure in lungs; air forced out
14. Which one of the following describes the mechanics of breathing during exercise?
A. Pectoral muscles contract; increasing size of chest cavity; abdominals contract; forced expiration
B. Pectoral muscles contract; decreasing size of chest cavity; abdominals contract; forced expiration
C. Pectoral muscles contract; increasing size of chest cavity; abdominals relax; forced expiration
D. Pectoral muscles contract; increasing size of chest cavity; abdominals contract; passive expiration
15. Which one of the following definitions of lung volumes is NOT correct?
A. Tidal Volume is the amount of air entering the lungs during normal inspiration at rest.
B. The Inspiratory Reserve Volume can be as high as 3000ml.
C. The Expiratory Reserve Volume is the amount of extra air inspired
D. Residual Volume is the amount of air left in the lungs following a maximal expiration
16. Which one of the following definitions of lung volumes is incorrect?
A. Tidal Volume is usually about 500 mls
B. The Inspiratory Reserve Volume is the amount of extra air inspired
C. The Expiratory Reserve Volume is the amount of extra air expired
D. Residual Volume is the amount of air left in the lungs following a maximal inspiration
17. Which one of the following is the lung volume that does not change during exercise?
A. Residual volume
B. Expiratory reserve volume
C. Tidal volume
D. Inspiratory reserve volume
18. Which one of the following statements concerning blood vessels is correct?
A. Veins carry blood away from the heart
B. Arteries carry blood towards the heart
C. Veins carry blood away towards the lungs
D. Arteries carry blood away from the heart
19. Which one of the following statements about blood flow is correct?
A. Rings of muscle in the small arteries can relax, increasing their diameter; this is called vasoconstriction
B. Rings of muscle in the small arteries can contract, decreasing their diameter; this is called vasoconstriction
C. Rings of muscle in the small arteries can contract, increasing their diameter; this is called vasodilation
D. Rings of muscle in the small arteries can contract, decreasing their diameter; this is called vasoconstriction
20. Which one of the following statements concerning arteries is correct?
A. Arteries have a small lumen, are elastic and have valves
B. Arteries have a large lumen, are elastic and have no valves
C. Arteries have a large lumen, are inelastic and have valves
D. Arteries have a small lumen, are elastic and have no valves
21. Which one of the following statements concerning veins is correct?
A. Veins have a large lumen, are elastic and have valves

- B. Veins have a small lumen, are inelastic and have valves
 C. Veins have a large lumen, are inelastic and have no valves
 D. Veins have a large lumen, are elastic and have no valves
22. Which one of the following statements about capillaries is correct?
 A. Capillaries are thick-walled, wide and have valves
 B. Capillaries are thick-walled, narrow and have no valves
 C. Capillaries are thin-walled, wide and have valves
 D. Capillaries are thin-walled, narrow and have no valves
18. Which one of the following statements about the heart is correct?
 A. The right side of the heart takes in deoxygenated blood through the veins
 B. The right side of the heart takes in oxygenated blood through the veins
 C. The left side of the heart takes in deoxygenated blood through the arteries
 D. The left side of the heart takes in oxygenated blood through the arteries
19. Which one of the following statements about the cardiac cycle are correct?
 A. In systole, the heart ventricles are relaxed and the heart empties blood
 B. In diastole, the heart ventricles are relaxed and the heart fills with blood.
 C. In systole, the heart ventricles contract and the heart fills with blood
 D. In diastole, the heart ventricles contract and the heart empties blood
20. Which one of the following statements about the cardiac cycle are correct?
 A. During systole, the atria and ventricles are relaxed and the A-V valves are closed
 B. During diastole, the atria and ventricles are relaxed and the A-V valves are closed
 C. During systole, the atria and ventricles are relaxed and the A-V valves are open
 D. During diastole, the atria and ventricles are relaxed and the A-V valves are open
21. Which one of the following statements about the cardiac cycle are correct?
 A. During systole the right ventricle contracts, forcing blood along the pulmonary vein towards the lungs
 B. During systole the left ventricle contracts, forcing blood along the pulmonary artery towards the lungs
 C. During systole the right ventricle contracts, forcing blood along the pulmonary artery towards the lungs
 D. During systole the left ventricle contracts, forcing blood along the pulmonary artery towards the lungs
22. Which one of the following statements about the heart is correct?
 A. Cardiac Output is the volume of blood that the heart is able to pump out in one beat
 B. Cardiac Output is the volume of blood that the heart is able to pump out in one minute
 C. Stroke volume is the volume of blood that the heart is able to pump out in one minute
 D. Stroke volume is the volume of blood that the heart is able to take in one beat
23. Which one of the following statements about the heart is correct?
 A. Cardiac Output [Q] = Heart Rate [HR] + Stroke Volume [SV]
 B. Cardiac Output [Q] = Heart Rate [HR] x Stroke Volume [SV]
 C. Cardiac Output [Q] = Heart Rate [HR] - Stroke Volume [SV]
 D. Cardiac Output [Q] = Heart Rate [HR] ÷ Stroke Volume [SV]
24. Which one of the following concerning anticipatory rise is correct?
 A. Anticipatory rise occurs before exercise, when the heart rate increases during exercise
 B. Anticipatory rise occurs during exercise, when the heart rate decreases without exercise
 C. Anticipatory rise occurs before exercise, when the heart rate increases without exercise
 D. Anticipatory rise occurs during exercise, when the heart rate decreases during exercise

1 c Anaerobic and Aerobic Exercise

- Which one of the following statements is correct about aerobic energy?
 - Aerobic energy for muscle contractions is supplied by breaking down glucose using oxygen
 - Aerobic energy for muscle contractions is supplied by breaking down muscle using oxygen
 - Aerobic energy for muscle contractions is supplied by breaking down glucose without using oxygen
 - Aerobic energy for muscle contractions is supplied by breaking down muscle without using oxygen
- Which one of the following statements is correct about anaerobic exercise?
 - Anaerobic exercise is where the exercise happens in the absence of oxygen
 - Anaerobic exercise is where the energy needed for exercise is provided in the presence of oxygen
 - Anaerobic exercise is where the energy needed for exercise is provided in the absence of oxygen
 - Anaerobic exercise is where energy is not needed for exercise
- Which one of the following statements is correct about aerobic and anaerobic physical activities?
 - Road cycling and golf putting are examples of activities where the energy is provided anaerobically
 - Sprinting and shot putting are examples of activities where the energy is provided anaerobically
 - Walking and pole vaulting are examples of activities where the energy is provided aerobically
 - Squash and rock climbing are examples of activities where the energy is provided aerobically
- Which one of the following statements concerning team games is correct?
 - During team games the activities are mainly anaerobic
 - During team games the activities are mainly aerobic
 - During team games the activities are often both aerobic and anaerobic
 - During team games the activities are rarely anaerobic
- Which one of the following reactions summarising aerobic energy production is correct?
 - Glucose + Oxygen → Carbon Dioxide + Water
 - Glucose → Energy + Carbon Dioxide + Water
 - Glucose + Oxygen → Energy + Carbon Dioxide
 - Glucose + Oxygen → Energy + Carbon Dioxide + Water
- Which one of the following reactions summarising anaerobic energy production is correct?
 - Glucose → Energy + Oxygen
 - Sucrose → Energy + Lactic Acid
 - Glucose + Oxygen → Energy + Carbon Dioxide
 - Glucose → Energy + Lactic Acid
- Which one of the following correctly identifies E.P.O.C?
 - Extra Pure Oxygen Calories
 - Extra Pure Oxygen Consumption
 - Excess Post-Exercise Oxygen Consumption
 - Excess Post-Exercise Oxygen Calories
- Which one of the following statements about EPOC is correct?
 - EPOC occurs because of aerobic exercise
 - EPOC removes lactic acid
 - EPOC occurs in anticipation of exercise
 - EPOC prevents sweating
- Which one of the following statements about the immediate effects of exercise is NOT correct?
 - Heart rate increases

- B. Breathing rate increases
 - C. Oxygen levels increase
 - D. Temperature increases
10. Which one of the following statements about the short-term effects of exercise is NOT correct?
- A. You get fatigued
 - B. You get DOMS
 - C. You get dizzy
 - D. You get hydrated
11. Which one of the following statements concerning a cool down is NOT correct?
- A. Helps prevent the clearing of waste products
 - B. Reduces the potential for DOMS
 - C. Allows breathing rate to return to resting levels
 - D. Allows the heart rate to return to its resting rate
12. Which one of the following statements concerning a cool down is NOT correct?
- A. Reduces the potential for DOMS
 - B. Reduces the flexibility of muscles
 - C. Reduces the chances of dizziness or fainting
 - D. Allows the heart rate to return to its resting rate
13. Which one of the following is NOT a benefit of massage following exercise?
- A. Helps reduce the pain caused by too much physical activity
 - B. Assists rehydration
 - C. Relieve delayed onset muscle soreness
 - D. Reduce the swelling in muscles that may be causing the stiffness in newly exercising muscles.
14. Which one of the following is NOT a long-term effect of regular exercise?
- A. Improved stamina
 - B. Improved flexibility
 - C. Improved health
 - D. Improved strength
15. Which one of the following is correct about hypertrophy?
- A. Hypertrophy is an increase in bone density
 - B. Hypertrophy is a decrease in fat content
 - C. Hypertrophy is an increase in heart mass
 - D. Hypertrophy is an increase in prize money
16. Which one of the following is correct about bradycardia?
- A. Bradycardia is a reduced resting heart rate
 - B. Bradycardia is an increased stroke volume
 - C. Bradycardia is an increased cardiac output
 - D. Bradycardia is an increase in heart muscle
17. Which one of the following statements about the long-term effects of exercise is NOT correct?
- A. Hypertrophy occurs
 - B. Bradycardia occurs
 - C. Dehydration occurs
 - D. Maturation occurs
18. Which one of the following statements about the long-term effects of training is NOT correct?
- A. Strength may improve
 - B. Stamina may improve
 - C. IQ may improve
 - D. Flexibility may improve

2 Movement Analysis

1. Which one of the following are correct about levers systems?
 - A. First class levers contain a resistance between the effort and the fulcrum
 - B. Second class levers contain fulcrum a between the effort and the resistance
 - C. Third class levers contain an effort between the fulcrum and the resistance
 - D. None of the above are correct

2. Which one of the following are correct about first class lever systems?
 - A. The resistance is in-between the effort and fulcrum
 - B. An example is when extension occurs at the knee
 - C. The resistance and effort are either side of the fulcrum
 - D. An example is plantar flexion at the ankle

3. Which one of the following are correct about second class lever systems?
 - A. The resistance is in-between the effort and fulcrum
 - B. An example is when extension occurs at the knee
 - C. The resistance and effort are either side of the fulcrum
 - D. An example is dorsi flexion at the ankle

4. Which one of the following are correct about third class lever systems?
 - A. The resistance is in-between the effort and fulcrum
 - B. An example is when extension occurs at the knee
 - C. The resistance and effort are either side of the fulcrum
 - D. An example is plantar flexion at the ankle

5. Which one of the following describes mechanical advantage?
 - A. The rapid movement of the ankle joint
 - B. The limited range of movement at the elbow
 - C. The large force that can be applied at the ankle
 - D. The slow movement at the elbow

6. Which one of the following describes mechanical advantage?
 - A. The slow movement of the ankle joint
 - B. The large range of movement at the elbow
 - C. The small force that can be applied at the ankle
 - D. The slow movement at the elbow

7. Which one of the following is correct about levers systems?
 - A. The effort arm is the distance between the effort and the resistance
 - B. The resistance arm is the distance between the resistance and the load
 - C. The effort arm is the distance between the resistance and the fulcrum
 - D. The resistance arm is the distance between the fulcrum and the load

8. Which one of the following is correct about actions in the arm?
 - A. When the biceps contract the arm straightens
 - B. When the triceps contracts the arm bends
 - C. When the biceps contract the arm bends
 - D. When the triceps and biceps contracts the arm straightens

9. Which one of the following is correct about actions in the arm?
 - A. When the biceps contracts, the arm bends and the biceps is the antagonist
 - B. When the triceps contracts, the arm straightens and the triceps is the antagonist
 - C. When the biceps contracts, the arm bends and the biceps is the agonist
 - D. When the triceps contracts, the arm straightens and the biceps is the agonist

10. Which one of the following is correct about tendons and ligaments?
 - A. Tendons attach muscles to bones
 - B. Ligaments attach bones to muscles
 - C. Tendons attach bones to joints

D. Ligaments attach muscles to joints

11. Which one of the following is correct about muscle contractions?

- A. During eccentric contractions the muscle lengthens
- B. During concentric contractions the muscle lengthens
- C. During isometric contractions the muscle shortens
- D. During isometric contractions the muscle lengthens

12. Which one of the following is correct about leg action?

- A. Leg action during running takes place in the frontal plane and around a longitudinal axis
- B. Leg action during running takes place in the transverse plane and around a frontal axis
- C. Leg action during running takes place in the longitudinal plane and around a sagittal axis
- D. Leg action during running takes place in the sagittal plane and around a transverse axis

13. Which one of the following is correct about planes and axes?

- A. Arm action during a cartwheel takes place in the frontal plane and around a sagittal axis
- B. Arm action during a cartwheel takes place in the transverse plane and around a frontal axis
- C. Arm action during a cartwheel takes place in the sagittal plane and around a longitudinal axis
- D. Arm action during a cartwheel takes place in the longitudinal plane and around a transverse axis

14. Which one of the following is correct about planes and axes?

- A. Body action during an ice skating spin takes place in the longitudinal plane and around a frontal axis
- B. Body action during an ice skating spin takes place in the transverse plane and around a longitudinal axis
- C. Body action during an ice skating spin takes place in the frontal plane and around a sagittal axis
- D. Body action during an ice skating spin takes place in the sagittal plane and around a transverse axis

B

15. Which one of the following is correct about the elbow joint?

- A. Flexion occurs when the triceps contracts
- B. Extension occurs when the triceps contracts
- C. Flexion occurs when the biceps relaxes
- D. Extension occurs when the biceps contracts

16. Which one of the following is correct about the shoulder joint?

- A. Flexion occurs when the latissimus dorsi contracts
- B. Extension occurs when the deltoid relaxes
- C. Flexion occurs when the deltoids contracts
- D. Extension occurs when the latissimus dorsi relaxes

17. Which one of the following is correct about the shoulder joint?

- A. Abduction occurs when the latissimus dorsi contracts
- B. Adduction occurs when the deltoid relaxes
- C. Abduction occurs when the deltoids contracts
- D. Adduction occurs when the latissimus dorsi relaxes

18. Which one of the following is correct about the knee joint?

- A. Flexion occurs when the hamstrings contract
- B. Extension occurs when the quadriceps relax
- C. Flexion occurs when the quadriceps contract
- D. Extension occurs when the gluteals contract

19. Which one of the following is correct about the hip joint?

- A. Flexion occurs when the hip flexors contract
- B. Extension occurs when the hamstrings relax

- C. Flexion occurs when the hamstrings contract
 - D. Extension occurs when the hip flexors relax
20. Which one of the following is correct about the ankle joint?
- A. Dorsiflexion occurs when the gastrocnemius contracts
 - B. Plantar flexion occurs when the gastrocnemius relaxes
 - C. Dorsiflexion occurs when the tibialis anterior contracts
 - D. Plantar flexion occurs when the quadriceps relax

3 Physical Training

1. Which one of the following is the correct definition of health?
 - A. A state of freedom from disease
 - B. A state of well-being that includes the absence of disease
 - C. A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity
 - D. A state of physical, mental and social well-being
2. Which one of the following is the correct definition of fitness?
 - A. The ability to deal with everyday things
 - B. The ability to cope with the demands of the environment
 - C. The ability to perform exercise without stress
 - D. The ability to manage the demands of your sport
3. Which one of the following statements concerning the relationship between fitness and health is correct?
 - A. Increasing your fitness will also increase your health
 - B. You need good health in order to be fit
 - C. Being unhealthy does not necessarily mean being unfit
 - D. Health and fitness go hand in hand
4. Which one of the following fitness components is defined as the ability to change direction quickly?
 - A. Speed
 - B. Agility
 - C. Balance
 - D. Co-ordination
5. Which one of the following is the correct definition of agility?
 - A. The ability to control movements with directional changes
 - B. The ability to change direction with control
 - C. The ability to quickly change direction
 - D. The ability to change direction quickly with control
6. In which one of the following activities is agility an important fitness component?
 - A. 100-metre sprint
 - B. Springboard diving
 - C. Long jumping
 - D. Rowing
7. Which one of the following fitness components is defined as the ability to maintain the centre of mass over the base of support?
 - A. Flexibility
 - B. Agility
 - C. Balance
 - D. Co-ordination
8. Which one of the following is the correct definition of balance?
 - A. The ability to keep your mass stable
 - B. The ability to keep your base of support in the centre of your balance

- C. The ability to maintain your base of support stable
D. The ability to maintain the centre of mass over the base of support
9. In which one of the following activities is balance an important fitness component?
A. 100-metre sprint
B. Springboard diving
C. Gymnastics beam routine
D. Rowing
10. Which one of the following fitness components is defined as the ability of the heart and lungs to supply oxygen to the working muscles?
A. Flexibility
B. Cardio-vascular endurance
C. Balance
D. Co-ordination
11. Which one of the following is the correct definition of cardio-vascular endurance?
A. The ability of the heart and lungs to supply oxygen to the working muscles
B. The ability of the heart and blood to supply oxygen to the working muscles
C. The ability of the blood to deliver oxygen to the working muscles
D. The ability of the lungs, heart and blood to deliver oxygen to the working muscles
12. In which one of the following activities is cardio-vascular endurance an important fitness component?
A. 100-metre sprint
B. Springboard diving
C. Gymnastics beam routine
D. Rowing
13. Which one of the following fitness components is defined as the ability to use different (two or more) parts of the body together smoothly and efficiently?
A. Flexibility
B. Reaction time
C. Balance
D. Co-ordination
14. Which one of the following is the correct definition of co-ordination?
A. The ability to catch and hit balls efficiently
B. The ability to use the arms and legs to move efficiently
C. The ability to use different parts of the body together smoothly and efficiently
D. The ability to move easily and quickly into positions
15. In which one of the following activities is co-ordination an important fitness component?
A. Goalkeeping
B. Springboard diving
C. Gymnastics beam routine
D. Rowing
16. Which one of the following fitness components is defined as the range of movement possible at a joint?
A. Flexibility
B. Reaction time
C. Balance
D. Co-ordination
17. In which one of the following activities is flexibility an important fitness component?
A. Goalkeeping
B. Springboard diving
C. Gymnastics beam routine

D. Rowing

18. Which one of the following fitness components is defined as the ability of a muscle to undergo repeated contractions avoiding fatigue?

- A. Flexibility
- B. Muscular endurance
- C. Balance
- D. Co-ordination

19. Which one of the following is the correct definition of muscular endurance?

- A. The ability of a group of muscles to contract efficiently
- B. The ability of a muscle group to delay fatigue
- C. The ability of a group of muscles to contract repeatedly
- D. The ability of a muscle to undergo repeated contractions and avoid fatigue.

20. In which one of the following activities is muscular endurance an important fitness component?

- A. Goalkeeping
- B. Springboard diving
- C. Gymnastics beam routine
- D. Rowing

21. Which one of the following fitness components is defined as the product of strength and speed?

- A. Flexibility
- B. Muscular strength
- C. Power
- D. Co-ordination

22. Which one of the following is the correct definition of power?

- A. The product of strength and speed
- B. The sum of strength and speed
- C. The product of stamina and speed
- D. The sum of strength and suppleness

23. In which one of the following activities is power NOT an important fitness component?

- A. Rugby scrum
- B. Springboard diving
- C. Gymnastics balance
- D. Rowing

24. Which one of the following fitness components is defined as the time taken to initiate a response to a stimulus?

- A. Flexibility
- B. Reaction time
- C. Power
- D. Co-ordination

25. Which one of the following is the correct definition of reaction time?

- A. The time taken to complete a response
- B. The time taken to initiate a stimulus
- C. The time taken to react
- D. The time taken to initiate a response to a stimulus

26. In which one of the following activities is reaction time an important fitness component?

- A. Rugby scrum
- B. Springboard diving
- C. Basketball shooting
- D. Rowing

27. Which one of the following fitness components is defined as the maximum rate at which an individual is able to perform a movement?
- A. Speed
 - B. Reaction time
 - C. Power
 - D. Co-ordination
28. Which one of the following is the correct definition of speed?
- A. The maximum rate at which an individual is able to perform a movement
 - B. The maximum time it takes to complete a movement
 - C. The maximum rate at which a movement is made
 - D. The maximum movement that can be made in a certain time
29. In which one of the following activities is speed an important fitness component?
- A. Rugby scrum
 - B. Marathon running
 - C. Table tennis
 - D. Rowing
30. Which one of the following fitness components is defined as the ability to overcome a resistance?
- A. Speed
 - B. Reaction time
 - C. Power
 - D. Strength
31. Which one of the following is the correct definition of strength?
- A. The ability to overcome an opponent
 - B. The ability to resist an opponent
 - C. The ability to oppose a resistance
 - D. The ability to overcome a resistance
32. In which one of the following activities is strength an important fitness component?
- A. Rugby scrum
 - B. Marathon running
 - C. Table tennis
 - D. Gymnastics routine
33. Which one of the following is another name for explosive strength?
- A. Speed
 - B. Power
 - C. Muscle
 - D. Dynamic
34. Which one of the following defines static strength?
- A. Using strength when moving
 - B. Using strength when balanced
 - C. Using strength repeatedly
 - D. Using strength without moving
35. Which one of the following is NOT a reason why people undertake fitness tests?
- A. To identify strengths and weaknesses
 - B. To measure fitness
 - C. To see improvements in fitness
 - D. To change the training programme
36. Which one of the following is NOT a reason why people undertake fitness tests?
- A. To compare to others
 - B. To motivate people

- C. To make people repeat tests
D. To improve fitness
37. Which one of the following statements is NOT correct about the Illinois agility test?
A. The performer starts face down on the floor
B. The test involves running round the cones
C. It is a sub-maximal test
D. It is timed in seconds
38. Which one of the following is NOT correct about the stork balance test?
A. You start balanced on one leg
B. It is measured in seconds
C. You balance on your toes
D. You use your hands for balance
39. Which one of the following is NOT correct about the multistage fitness test?
A. You run quicker every shuttle
B. Each shuttle is 20 metres long
C. It is a maximal test
D. It measures cardio-vascular fitness
40. Which one of the following is NOT correct about the Anderson ball-catch test?
A. It is a test for co-ordination
B. It lasts 60 seconds
C. It involves throwing a ball against a wall
D. You can only use one hand
41. Which one of the following is NOT correct about the sit and reach test?
A. You sit on the floor with your feet against the box
B. You stretch as far as possible
C. The further you stretch the greater your flexibility
D. It measures flexibility in your arms
42. Which one of the following is NOT correct about the abdominal curl conditioning test?
A. You do sit ups in time to the beep
B. A partner holds your feet
C. It measures muscular strength
D. The test is maximal
43. Which one of the following is NOT correct about the vertical jump test?
A. It measures explosive strength
B. You push the slider up as high as you can stretch
C. You jump as high as you can
D. The height you jump measures your power
44. Which one of the following is NOT correct about the ruler drop test?
A. The further the ruler drops the better your score
B. Your partner drops the ruler on your signal
C. It measures reaction time
D. The equipment needed is simply a metre ruler
45. Which one of the following is correct about the one rep max test?
A. It involves a standard weight-lifting exercise
B. It measures muscular endurance
C. You are allowed three attempts at each weight
D. The result is the weight you cannot lift
46. Which one of the following is NOT correct about the 30-metre sprint test?
A. It measures speed
B. You use a running start

- C. You should complete it in under 4 seconds
D. You are allowed three attempts
47. Which one of the following tests would you use to measure reaction time?
A. A stork balance
B. A ball-catch test
C. A ruler drop test
D. A 30 metre sprint
48. Which one of the following tests would you use to measure power?
A. A curl conditioning test
B. A multistage fitness test
C. A one rep max test
D. A vertical jump test
49. Which one of the following best describes the fitness components needed by a goalkeeper?
A. Stamina, agility and strength
B. Agility, balance and speed
C. Reaction time, power and strength
D. Balance, co-ordination and agility
50. Which one of the following best describes the fitness components needed by a trampolinist?
A. Stamina, agility and strength
B. Agility, balance and speed
C. Reaction time, power and strength
D. Flexibility, co-ordination and agility
51. Which one of the following best describes the fitness components needed by a discus thrower?
A. Stamina, agility and strength
B. Agility, balance and speed
C. Reaction time, power and strength
D. Flexibility, co-ordination and stamina
52. Which one of the following identifies some of the main principles of training?
A. Stamina, overload and reversibility
B. Overload, reversibility and tedium
C. Specific, frequency and progression
D. Frequency, intensity and type
53. Which one of the following correctly explains the S in the principles of training?
A. Specific to the activity and the performer
B. Suitable to the performer and the season
C. Safe for the performer
D. Special for the activity concerned
54. Which one of the following correctly explains the principle of overload?
A. Working so hard it causes DOMS
B. Working harder than normal
C. Working the same as normal
D. Working with heavy weights
55. Which one of the following correctly explains the principle of reversibility?
A. Doing the training exercises in reverse order
B. Reserving a time and place for training
C. Losing fitness because of not training
D. Resting in order to allow training to have an effect
56. Which one of the following correctly explains how to overload?

- A. Increase frequency, intensity and time
 - B. Increase fitness, intensity and type
 - C. Increase frequency, interval and time
 - D. Increase fitness, interval and type
57. Which one of the following types of training would be best for a road cyclist?
- A. Circuit training
 - B. Plyometrics
 - C. Continuous training
 - D. Fartlek training
58. Which one of the following types of training would be best for a gymnast?
- A. Circuit training
 - B. Weight training
 - C. Continuous training
 - D. Fartlek training
59. Which one of the following types of training would be best for a shot putter?
- A. Circuit training
 - B. Weight training
 - C. Continuous training
 - D. Fartlek training
60. Which one of the following types of training would be best for a 400-metre runner?
- A. Circuit training
 - B. Weight training
 - C. Plyometrics
 - D. Fartlek training
61. Which one of the following activities might benefit from a period of altitude training?
- A. Sprint cyclist
 - B. Pole vaulter
 - C. Long distance runner
 - D. Table tennis player
62. Which one of the following usually results from training at altitude?
- A. Increased numbers of white blood cells
 - B. Increased numbers of red blood cells
 - C. Reduced numbers of white blood cells
 - D. Reduced numbers of red blood cells
63. Which one of the following is NOT a possible reason why altitude training is not always successful?
- A. Fitness may be lost
 - B. Performers may get sick
 - C. It is often very cold
 - D. The effects wear off very quickly
64. Which one of the following is NOT a benefit of a warm up?
- A. Increases blood flow
 - B. Increases psychological preparation
 - C. Increases fitness
 - D. Increases range of movement
65. Which one of the following correctly describes the sequence of activities that should be included in a cool down?
- A. Lying down to stop blood flowing too quickly
 - B. Stretching, jumping and running exercises
 - C. Exercises of gradually increasing intensity
 - D. Jogging to reduce heart rate and static stretching