

**MULTIPLE CHOICE
QUESTION PAPER**



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| Paper number: SAMPLE 4 Please ensure that this paper number is referenced on your candidate answer sheet | Time allocation: 45 minutes |
| Title: <p style="text-align: center;">Level 2 Anatomy and Physiology for Exercise and Fitness Instructors (K/616/7823) - Sample Assessment Materials</p> | |
| Student: XXXXXX Sample 4 | |
| Special Instructions: <p>This asample sssessment contains 30 multiple-choice questions. You need to correctly answer 21 out of 30 questions (70%) to pass.</p> <p>Each question is worth one mark. You should select one response (a, b, c or d) for each question and record this on your answer sheet. Please do not write on the question paper.</p> <p>Try to answer all questions and check your responses, if you have time to do so.</p> | |

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- Q1** Which of the following statements about synovial joints is true?
- a) The hip is an example of a saddle joint
 - b) The elbow is an example of gliding joint
 - c) The knee is an example of a hinge joint
 - d) The shoulder is an example of a pivot joint
- Q2** Which of the following statements about the nervous system is true?
- a) Blood pressure is controlled by the somatic system
 - b) Blood pressure is controlled by the autonomic system
 - c) Skeletal muscle contraction is controlled by the parasympathetic nervous system
 - d) Skeletal muscle contraction is controlled by the sympathetic nervous system
- Q3** Which of the following describes the 'all-or-none' law?
- a) An action potential will maximally innervate a percentage of muscle fibres within a single motor unit
 - b) An action potential will maximally innervate all muscle fibres within every motor unit
 - c) An action potential will maximally innervate all muscle fibres within a single motor unit
 - d) An action potential will maximally innervate a percentage of muscle fibres within every motor unit
- Q4** Which of the following describes a function of skeletal muscle?
- a) They relax and lengthen to perform a role as a fixator
 - b) They relax and lengthen to perform a role as a synergist
 - c) They contract and shorten to perform a role as a prime mover
 - d) They contract and shorten to perform a role as an antagonist
- Q5** Which of the following correctly describes the structure of synovial joints?
- a) Tendons attach bone to bone
 - b) The synovial membrane prevents friction during movement
 - c) The articular cartilage provides stability to the joint
 - d) Ligaments provide stability to the joint
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- Q6** Which of the following correctly describes the process of diffusion in the lungs?
- a) Diffusion is the movement of molecules from an area of lesser concentration to an area of higher concentration
 - b) Diffusion involves the movement of oxygen into the capillaries to be expelled by the lungs
 - c) Diffusion involves the movement of carbon dioxide into the capillaries to be used by the body
 - d) Diffusion is the movement of molecules from an area of greater concentration to an area of lesser concentration
- Q7** Which of the following describes a function of the skeleton?
- a) The flat bones act as a levers for movement
 - b) The irregular bones act as strong attachment points for muscles
 - c) The long bones act as a levers for movement
 - d) The short bones act as strong attachment points for muscles
- Q8** Which of the following describes how blood moves through the four chambers of the heart?
- a) Oxygenated blood from the left atria moves to the right ventricle
 - b) Deoxygenated blood from the left atria moves to the right ventricle
 - c) Oxygenated blood from the left atria moves to the left ventricle
 - d) Deoxygenated blood from the left atria moves to the left ventricle
- Q9** Which of the following describes the action of the gastrocnemius when it contracts eccentrically?
- a) The muscle shortens and the ankle plantar flexes
 - b) The muscle lengthens and the ankle plantar flexes
 - c) The muscle lengthens and the ankle dorsi flexes
 - d) The muscle shortens and the ankle dorsi flexes
- Q10** Which of the following sections of the spine has the least range of motion?
- a) Lumbar
 - b) Thoracic
 - c) Sacral
 - d) Cervical
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Q11 Which of the following is an example of a flat bone?

- a) Ischium
- b) Patella
- c) Scapula
- d) Clavicle

Q12 Which of the following describes gaseous exchange?

- a) Carbon dioxide diffuses from the pulmonary capillaries to be circulated around the body
- b) Oxygen in the alveoli diffuses into the pulmonary capillaries to be circulated around the body
- c) Oxygen in the pulmonary capillaries diffuses into the alveoli to be expelled
- d) Carbon dioxide diffuses from the alveoli to the pulmonary capillaries to be expelled

Q13 Which of the following describes how exercise can enhance neuromuscular connections?

- a) It can increase the number of smaller motor units
- b) It can reduce the number of smaller motor units
- c) It can reduce the speed of nerve impulses
- d) It can increase the speed of nerve impulses

Q14 Which of the following is a muscle associated with the pelvic floor?

- a) Coccygeus
- b) Iliopsoas
- c) Gluteals
- d) Erector spinae

Q15 Which of the following should be encouraged with post-natal clients when first returning to exercise?

- a) Full sit-ups
- b) Heavy resistance training
- c) Strengthening pelvic floor muscles
- d) High-impact training

Q16 Which of the following muscles is located anterior of the femur?

- a) Hamstrings
- b) Gluteals
- c) Tibialis anterior
- d) Quadriceps

Q17 Which of the following describes the trachea?

- a) It is the hollow tube that connects the larynx to the bronchioles
- b) It is the hollow tube that connects the larynx to the bronchi
- c) It is a hollow tube made of cancellous bone
- d) It is a hollow tube made of compact bone

Q18 Which of the following explains bone growth?

- a) The bones cells that contribute to bone building are osteoblasts
- b) The process of bone growth is dependent on dietary intake of vitamin C
- c) The process of bone growth is fully dependent on dietary intake of vitamin A
- d) The bones cells that contribute to bone building are osteoclasts

Q19 Which of the following describes the structure of veins?

- a) All veins carry deoxygenated blood
- b) They have thinner, less-muscular walls than arteries
- c) They have thicker, more-muscular walls than arteries
- d) All veins carry oxygenated blood

Q20 Which of the following describes the basic structure of skeletal muscle?

- a) Skeletal muscles consist of 50% water and 50% protein
- b) Myosin and actin are the myofilaments within the sarcomere
- c) The epimysium is a connective tissue that surrounds the sarcomere
- d) Skeletal muscles attach to bones via ligaments

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- Q21** Which of the following statements about joint classification is true?
- a) Slightly movable joints are fibrous
 - b) Freely moveable joints are cartilaginous
 - c) Immovable joints are fused
 - d) Synovial joints are cartilaginous
- Q22** How does fluid intake aid the digestive process?
- a) It assists the contraction of muscles
 - b) It helps to regulate blood pressure
 - c) It helps to reduce constipation
 - d) It optimises the function of the kidneys
- Q23** Which of the following statements about the structure of the heart is true?
- a) The ventricles are the smaller, superior chambers
 - b) The ventricles are the larger, inferior chambers
 - c) The ventricles are the smaller, inferior chambers
 - d) The ventricles are the larger, superior chambers
- Q24** Which of the following muscles is located laterally to the spine?
- a) Obliques
 - b) Pelvic floor
 - c) Rectus abdominus
 - d) Erector spinae
- Q25** Which of the following describes a principle of muscle contraction?
- a) Fixator muscles assist the contraction of the prime mover
 - b) Muscles work in pairs and the contracting muscle is the agonist
 - c) Fixator muscles assist the contraction of the antagonist
 - d) Muscles work in pairs and the contracting muscle is the antagonist

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- Q26** The aerobic energy system is used for
- a) instantaneous bursts of activity lasting for just a few seconds
 - b) very quick bursts of high-intensity activity, lasting on average less than a minute
 - c) sustained activity lasting more than 90 s
 - d) longer duration activities and exercise involving maximum efforts
- Q27** Which of the following statements about the structure of long bones is true?
- a) The diaphysis is formed of cancellous bone
 - b) The epiphysis is formed of compact bone
 - c) The growth plates adapt throughout the lifespan
 - d) The ends of a long bone are covered by hyaline cartilage
- Q28** Which of the following are part of the systemic circulatory system?
- a) The left ventricle and the aorta
 - b) The right ventricle and the pulmonary arteries
 - c) The right ventricle and the aorta
 - d) The left ventricle and the pulmonary arteries
- Q29** Which of the following describes the postural deviation hyperkyphosis?
- a) An excessive inward curve of the thoracic spine
 - b) An excessive outward curve of the lumbar spine
 - c) An excessive inward curve of the lumbar spine
 - d) An excessive outward curve of the thoracic spine
- Q30** Which of the following describes pronation and supination?
- a) Pronation and supination are movements of the wrist joint
 - b) Pronation and supination are movements of the ankle joint
 - c) Pronation and supination are movements of the radioulnar joint
 - d) Pronation and supination are movements of the hip joint
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Sample Assessment

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Important! The form should be completed IN CAPITAL LETTERS using a BLACK ballpoint pen. Characters and marks used should be similar to:

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 1 2 3 4 5 6 7 8 9 0

To select a checkbox:

or



YMCA Awards Theory Paper

This candidate answer sheet must be used with a paper in the following structure:

30 Questions

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Site Code: SAM001/001 Assessment Date: 01/03/2018

Paper: Sample 4

Student: XXXXXX Sample 4

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| Q1 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> | Q16 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> |
| Q2 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> | Q17 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> |
| Q3 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> | Q18 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> |
| Q4 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> | Q19 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> |
| Q5 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> | Q20 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> |
| Q6 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> | Q21 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> |
| Q7 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> | Q22 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> |
| Q8 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> | Q23 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> |
| Q9 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> | Q24 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> |
| Q10 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> | Q25 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> |
| Q11 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> | Q26 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> |
| Q12 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> | Q27 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> |
| Q13 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> | Q28 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> |
| Q14 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> | Q29 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> |
| Q15 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> | Q30 | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d | <input type="checkbox"/> |

Invigilator Name (must be clearly printed)

Invigilator Signature (Please keep inside box)

Candidate Signature (Please keep inside box)



Sample Assessment

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