

**MULTIPLE CHOICE
QUESTION PAPER**



Paper number: SAMPLE 3 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 3	
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 describes neutral spine alignment?
- a) When the spine is in neutral alignment there is a mild S-shaped curve
 - b) When the spine is in neutral there is natural kyphosis of the lumbar and cervical spine
 - c) When the spine is in neutral alignment there is an emphasised S-shaped curve
 - d) When the spine is in neutral there is natural lordosis of the thoracic and sacral spine
- Q2** A deep muscle located anterior to the spine is the
- a) external obliques
 - b) transverse abdominis
 - c) erector spinae
 - d) rectus abdominis
- Q3** Which of the following explains the importance of minerals in the process of bone growth?
- a) Sodium is the most important mineral during the process of bone growth
 - b) Calcium is the most important mineral during the process of bone growth
 - c) Magnesium is the most important mineral during the process of bone growth
 - d) Iron is the most important mineral during the process of bone growth
- Q4** Which of the following describes a function of the skeleton?
- a) Calcium is stored in the bone marrow
 - b) The skeletal structures produce vital water-soluble vitamins
 - c) Short bones act as the levers for movement
 - d) The skeletal structures offer protection to the vital organs
- Q5** Which of the following describes the function of the aorta?
- a) It carries oxygenated blood to the heart
 - b) It carries oxygenated blood to the body
 - c) It carries deoxygenated blood to the lungs
 - d) It carries deoxygenated blood to the heart

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- Q6** Which of the following describes the trachea?
- a) It is the hollow tube that connects the larynx to the bronchioles
 - b) It is a hollow tube made of cancellous bone
 - c) It is a hollow tube made of compact bone
 - d) It is the hollow tube that connects the larynx to the bronchi
- Q7** Which of the following describes the action of the rectus abdominis when it contracts concentrically?
- a) The muscle shortens to produce flexion of the spine
 - b) The muscle lengthens to produce extension of the spine
 - c) The muscle lengthens to produce flexion of the spine
 - d) The muscle shortens to produce extension of the spine
- Q8** Which of the following describes the 'all-or-none' law?
- a) An action potential will maximally innervate a percentage of muscle fibres within every motor unit
 - b) An action potential will maximally innervate all muscle fibres within a single motor unit
 - c) An action potential will maximally innervate a percentage of muscle fibres within a single motor unit
 - d) An action potential will maximally innervate all muscle fibres within every motor unit
- Q9** Which of the following describes the curves of the spine?
- a) The lumbar spine has a natural inward curve
 - b) The thoracic spine has a natural inward curve
 - c) The lumbar spine has a natural outward curve
 - d) The cervical spine has a natural outward curve
- Q10** Which of the following describes the basic structure of skeletal muscle?
- a) Skeletal muscles attach to bones via ligaments
 - b) The epimysium is a connective tissue that surrounds the sarcomere
 - c) Myosin and actin are the myofilaments within the sarcomere
 - d) Skeletal muscles consist of 50% water and 50% protein
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Q11 Which of the following describes gaseous exchange?

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

Q12 Which of the following statements about the structure of long bones is true?

- a) They store calcium in the medullary cavity at their centre
- b) The two ends of the long bone are the diaphysis
- c) They are covered by a connective tissue called the periosteum
- d) The main bone shaft of a long bone is the epiphysis

Q13 Which of the following statements about joint classification is true?

- a) The thumb is an example of a cartilaginous joint
- b) The knee is an example of a cartilaginous joint
- c) The ankle is an example of a freely moveable joint
- d) The lumbar spine is an example of a synovial joint

Q14 Which of the following is an example of a long bone?

- a) Patella
- b) Clavicle
- c) Phalanges
- d) Carpals

Q15 Which of the following is a **superficial** muscle located posterior to the femur?

- a) Hamstrings
- b) Soleus
- c) Adductors
- d) Quadriceps

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- Q16** Which of the following describes the range of motion available at a synovial joint?
- a) Flexion and extension are movements available at hinge joints
 - b) Abduction and adduction are movements available at hinge joints
 - c) Flexion and extension are movements available at pivot joints
 - d) Abduction and adduction are movements available at pivot joints
- Q17** Which of the following statements about the structure of the heart is true?
- a) The ventricles have less muscular walls
 - b) The atria have more muscular walls
 - c) The ventricles are the largest chambers
 - d) The atria are largest chambers
- Q18** Which of the following describes how exercise can enhance neuromuscular connections?
- a) It can improve the synchronous recruitment of motor units
 - b) It can increase the number of small motor units
 - c) It can reduce the speed of nerve impulses
 - d) It can increase the number of large motor units
- Q19** Which of the following describes a principle of muscle contraction?
- a) Muscles work in isolation to create movement
 - b) During muscle work, both the agonist and antagonist contract
 - c) During muscle contraction, it is only the origin of the muscle that moves
 - d) Muscles can only pull on bones to create movement
- Q20** Which of the following is a function of skeletal muscle?
- a) Assists digestion
 - b) Generates heat
 - c) Prevents stability
 - d) Restricts movement
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- Q21** How does fluid intake aid the digestive process?
- a) It optimises the function of the kidneys
 - b) It assists the contraction of muscles
 - c) It helps to reduce constipation
 - d) It helps to regulate blood pressure
- Q22** Which of the following gases diffuse into the alveoli to be expelled by the lungs?
- a) Carbon monoxide
 - b) Carbon dioxide
 - c) Oxygen
 - d) Hydrogen
- Q23** Which of the following should be encouraged with post-natal clients when first returning to exercise?
- a) Strengthening pelvic floor muscles
 - b) High-impact training
 - c) Full sit-ups
 - d) Heavy resistance training
- Q24** Which of the following correctly describes the structure of synovial joints?
- a) Ligaments attach bone to bone
 - b) Muscles move joints via ligament attachment
 - c) The articular cartilage provides lubrication
 - d) The synovial membrane prevents excessive movement
- Q25** The creatine phosphate 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
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- Q26** Which of the following are part of the pulmonary circulatory system?
- a) The right ventricle and the aorta
 - b) The right ventricle and the pulmonary arteries
 - c) The left ventricle and the aorta
 - d) The left ventricle and the pulmonary arteries
- Q27** Which of the following is a muscle associated with the pelvic floor?
- a) Iliopsoas
 - b) Gluteals
 - c) Erector spinae
 - d) Coccygeus
- Q28** Which of the following describes the movement potential and joint actions of the shoulder girdle?
- a) Internal and external rotation are movements of the shoulder girdle
 - b) Pronation and supination are movements of the shoulder girdle
 - c) Flexion and extension are movements of the shoulder girdle
 - d) Retraction and protraction are movements of the shoulder girdle
- Q29** Which of the following statements about the nervous system is true?
- a) Voluntary movement is controlled by the somatic nervous system
 - b) The 'fight-or-flight' response is controlled by the parasympathetic system
 - c) Involuntary movement is controlled by the somatic nervous system
 - d) Rest and relaxation are controlled by the sympathetic nervous system
- Q30** Which of the following describes how blood moves through the four chambers of the heart?
- a) Deoxygenated blood from the left atria moves to the right ventricle
 - b) Oxygenated blood from the left atria moves to the left ventricle
 - c) Oxygenated blood from the left atria moves to the right ventricle
 - d) Deoxygenated blood from the left atria moves to the left ventricle
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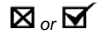
Sample Assessment

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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:



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 3

Student: XXXXXX Sample 3

- Q1 a b c d
- Q2 a b c d
- Q3 a b c d
- Q4 a b c d
- Q5 a b c d
- Q6 a b c d
- Q7 a b c d
- Q8 a b c d
- Q9 a b c d
- Q10 a b c d
- Q11 a b c d
- Q12 a b c d
- Q13 a b c d
- Q14 a b c d
- Q15 a b c d

- Q16 a b c d
- Q17 a b c d
- Q18 a b c d
- Q19 a b c d
- Q20 a b c d
- Q21 a b c d
- Q22 a b c d
- Q23 a b c d
- Q24 a b c d
- Q25 a b c d
- Q26 a b c d
- Q27 a b c d
- Q28 a b c d
- Q29 a b c d
- Q30 a b c d

Invigilator Name (must be clearly printed)

Invigilator Signature (Please keep inside box)

Candidate Signature (Please keep inside box)



Sample Assessment

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