

**MULTIPLE CHOICE  
QUESTION PAPER**



<b>Paper number:</b> <b>SAMPLE 2</b> Please ensure that this paper number is referenced on your candidate answer sheet	<b>Time allocation:</b> 45 minutes
<b>Title:</b>  <p style="text-align: center;">Level 2 Anatomy and Physiology for Exercise and Fitness Instructors (K/616/7823) - Sample Assessment Materials</p>	
<b>Student:</b> XXXXXX Sample 2	
<b>Special Instructions:</b> <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. <b>Please do not write on the question paper.</b></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 gases diffuse into the alveoli to be expelled by the lungs?
- a) Hydrogen
  - b) Carbon monoxide
  - c) Oxygen
  - d) Carbon dioxide
- Q2** 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) Retraction and protraction are movements of the shoulder girdle
  - d) Flexion and extension are movements of the shoulder girdle
- Q3** Which of the following are part of the pulmonary circulatory system?
- a) The left ventricle and the pulmonary arteries
  - b) The right ventricle and the aorta
  - c) The right ventricle and the pulmonary arteries
  - d) The left ventricle and the aorta
- Q4** Which of the following is a muscle associated with the pelvic floor?
- a) Iliopsoas
  - b) Gluteals
  - c) Coccygeus
  - d) Erector spinae
- Q5** Which of the following describes an isometric contraction?
- a) The muscle contracts without changing length
  - b) The muscle contracts and shortens
  - c) The muscle relaxes without changing length
  - d) The muscle relaxes and lengthens
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- Q6** Which of the following describes how blood moves through the four chambers of the heart?
- a) The right atrium receives oxygenated blood from the pulmonary arteries
  - b) The right atrium receives oxygenated blood from the pulmonary veins
  - c) The left atrium receives oxygenated blood from the pulmonary veins
  - d) The left atrium receives deoxygenated blood from the pulmonary arteries
- Q7** Which of the following describes neutral spine alignment?
- a) When the spine is in neutral alignment there is an exaggerated S-shaped curve
  - b) When the spine is in neutral alignment there is a mild S-shaped curve
  - c) When the spine is in neutral there is natural kyphosis of the lumbar and cervical spine
  - d) When the spine is in neutral there is natural lordosis of the thoracic and sacral spine
- Q8** Which of the following correctly describes the structure of synovial joints?
- a) The articular cartilage provides lubrication
  - b) Ligaments attach bone to bone
  - c) The synovial membrane prevents excessive movement
  - d) Muscles move joints via ligament attachment
- Q9** Which of the following describes the bronchi?
- a) They are extensions from the trachea that carry air into the lungs
  - b) They are the small air sacs where gaseous exchange takes place
  - c) They are extensions from the bronchioles that carry air into the lungs
  - d) They are the small air sacs at the end of the bronchioles
- Q10** Which of the following should be encouraged with post-natal clients when first returning to exercise?
- a) High-impact training
  - b) Heavy resistance training
  - c) Full sit-ups
  - d) Strengthening pelvic floor muscles
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- Q11** The entire muscle is surrounded by a broad protective fibrous sheath called the
- a) epimysium
  - b) endomysium
  - c) myofibril
  - d) sarcomere
- Q12** Which of the following describes a function of the skeleton?
- a) The long bones act as a levers for movement
  - b) The irregular bones act as strong attachment points for muscles
  - c) The short bones act as strong attachment points for muscles
  - d) The flat bones act as a levers for movement
- Q13** How does fluid intake aid the digestive process?
- a) It helps to regulate blood pressure
  - b) It optimises the function of the kidneys
  - c) It helps to reduce constipation
  - d) It assists the contraction of muscles
- Q14** 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
- Q15** Which of the following describes how exercise can enhance neuromuscular connections?
- a) It can increase the number of large motor units
  - b) It can reduce the speed of nerve impulses
  - c) It can increase the number of small motor units
  - d) It can improve the synchronous recruitment of motor units

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- Q16** Which of the following describes a principle of muscle contraction?
- a) Muscles work in pairs and the contracting muscle is the antagonist
  - b) Muscles work in pairs and the contracting muscle is the agonist
  - c) Fixator muscles assist the contraction of the antagonist
  - d) Fixator muscles assist the contraction of the prime mover
- Q17** Which of the following statements about joint classification is true?
- a) The lumbar spine is an example of a synovial joint
  - b) The ankle is an example of a freely moveable joint
  - c) The knee is an example of a cartilaginous joint
  - d) The thumb is an example of a cartilaginous joint
- Q18** Which of the following describes motor unit recruitment?
- a) Larger motor units are recruited first, then smaller motor units
  - b) If exercise intensity is low, only larger motor units will be recruited
  - c) Smaller motor units are recruited first, then larger motor units
  - d) If exercise intensity is high, only larger motor units will be recruited
- Q19** Which of the following statements about the structure of long bones is true?
- a) The growth plates adapt throughout the lifespan
  - b) The diaphysis is formed of cancellous bone
  - c) The ends of a long bone are covered by hyaline cartilage
  - d) The epiphysis is formed of compact bone
- Q20** Which of the following describes a function of skeletal muscle?
- a) They contract and shorten to perform a role as an antagonist
  - b) They contract and shorten to perform a role as a prime mover
  - c) They relax and lengthen to perform a role as a synergist
  - d) They relax and lengthen to perform a role as a fixator
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**Q21** 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 bones cells that contribute to bone building are osteoclasts
- d) The process of bone growth is fully dependent on dietary intake of vitamin A

**Q22** 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

**Q23** Which of the following is an example of a flat bone?

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

**Q24** Which of the following statements about the structure of the heart is true?

- a) The atria have more muscular walls
- b) The atria are largest chambers
- c) The ventricles are the largest chambers
- d) The ventricles have less muscular walls

**Q25** Which of the following muscles is located laterally to the spine?

- a) Erector spinae
- b) Pelvic floor
- c) Rectus abdominus
- d) Obliques

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- Q26** Which of the following is a **superficial** muscle located posterior to the femur?
- a) Quadriceps
  - b) Soleus
  - c) Hamstrings
  - d) Adductors
- Q27** Which of the following describes the function of the aorta?
- a) It carries oxygenated blood to the heart
  - b) It carries deoxygenated blood to the heart
  - c) It carries deoxygenated blood to the lungs
  - d) It carries oxygenated blood to the body
- Q28** Which of the following describes gaseous exchange?
- a) Carbon dioxide moves from the alveoli into the pulmonary capillaries to be circulated around the body
  - b) Carbon dioxide moves from the alveoli into the pulmonary capillaries to be expelled
  - c) Carbon dioxide moves from the pulmonary capillaries into the alveoli to be circulated around the body
  - d) Carbon dioxide moves from the pulmonary capillaries into the alveoli to be expelled
- Q29** Which of the following describes the postural deviation hyperkyphosis?
- a) An excessive inward curve of the lumbar spine
  - b) An excessive outward curve of the thoracic spine
  - c) An excessive inward curve of the thoracic spine
  - d) An excessive outward curve of the lumbar spine
- Q30** Which of the following statements about the nervous system is true?
- a) Skeletal muscle contraction is controlled by the sympathetic nervous system
  - b) Skeletal muscle contraction is controlled by the parasympathetic nervous system
  - c) Blood pressure is controlled by the somatic system
  - d) Blood pressure is controlled by the autonomic system
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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

# 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 2

Student: XXXXXX Sample 2

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)

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Invigilator Signature (Please keep inside box)

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Candidate Signature (Please keep inside box)

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Sample Assessment

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