

**MULTIPLE CHOICE
QUESTION PAPER**

Paper number APEH 3.0 Please insert this reference number in the appropriate boxes on your candidate answer sheet	Time allocation 50 minutes
Title <div style="text-align: center;"> <h2>MOCK Level 3</h2> <h1>Anatomy and Physiology for Exercise and Health</h1> <p>Unit Accreditation Number A/600/9051</p> </div>	
Special Instructions <p>This theory paper comprises questions that are indicative to the Level 3 Anatomy and Physiology for Exercise and Health unit. It contains questions that are phrased as standard multiple choice, pictorial, fill the blanks and/or complete the sentence style questions. Answers should be recorded as either a, b, c or d.</p> <p>The questions within this paper are proportionate to the assessment criteria within the unit and relate to the following:</p> <ul style="list-style-type: none"> • Heart and circulatory system • Musculoskeletal system • Posture and core stability • Nervous system • Endocrine system • Energy systems <p>This theory paper has 40 marks. A minimum total of 28 marks overall (70%) is required in order to pass.</p> <p>Important: Please do not write on this paper.</p>	

Q1

What is the name of the valve that is located between the left ventricle and left atrium? (1 mark)

- a. Tricuspid
- b. Aortic
- c. Pulmonary
- d. Bicuspid

Q2

Which sensory organs register the position of the body? (1 mark)

- a. Proprioceptors
- b. Thermoreceptors
- c. Chemoreceptors
- d. Baroreceptors

Q3

Which statement describes the endocrine system? (1 mark)

- a. It is made up of neurons that transmit information between different parts of the body
- b. It is made up of glands which secrete hormones into the bloodstream to regulate the body
- c. It is made up of bones which provide support and protection to major organs
- d. It is made up of muscles which allow movement of different parts of the body

Q4

In which anatomical plane does lordosis occur? (1 mark)

- a. Frontal
- b. Transverse
- c. Sagittal
- d. Coronal

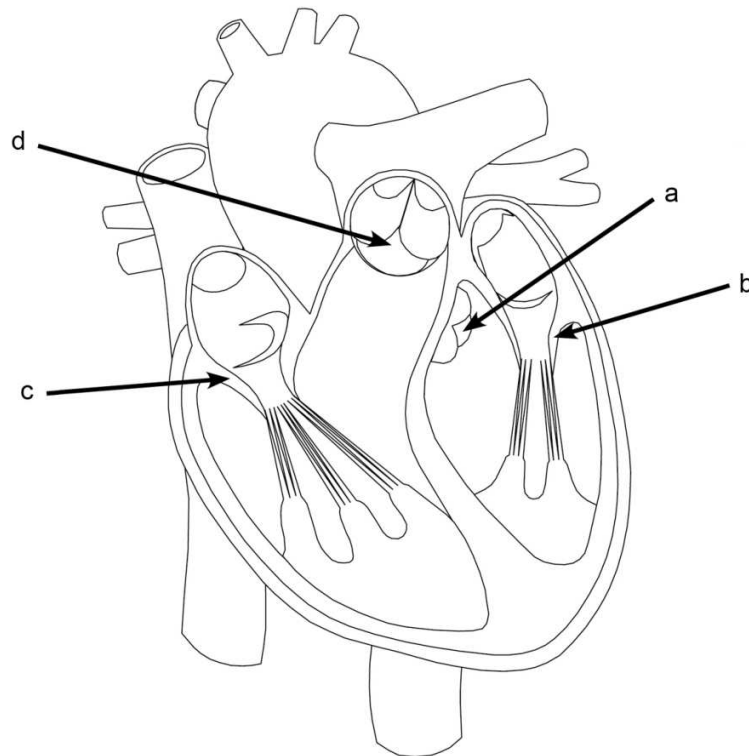
Q5

If a client with moderate hypertension began regular cardiovascular training, resting and exercising blood pressures can be reduced by: (1 mark)

- a. 1-10 mmHg
- b. 11-20 mmHg
- c. 21-30 mmHg
- d. 31-40 mmHg

Q6

Which one of the following valves prevents backflow of blood into the left ventricle? (1 mark)



Q7

The ovaries release hormones which:

- a. Activate milk production in women who are breast feeding
- b. Promote bone growth and development
- c. Stimulate the breakdown of Glycogen to Glucose
- d. Decrease hair growth on the body

Q8

How can the vascular system increase blood flow to a specific area of the body? (1 mark)

- a. By vasoconstriction of arterioles leading to that area of the body
- b. By vasodilation of venules leading to that area of the body
- c. By vasoconstriction of venules leading to that area of the body
- d. By vasodilation of arterioles leading to that area of the body

Q9

What is pyruvic acid converted to when there is inadequate oxygen? (1 mark)

- a. Lactic acid
- b. Creatine
- c. Carbon dioxide
- d. ADP

Q10

What statement describes a short term effect of exercise? (1 mark)

- a. A decrease in systolic blood pressure
- b. A decrease in stroke volume
- c. An increase in systolic blood pressure unrelated to exercise intensity
- d. An increase in systolic blood pressure related to exercise intensity

Q11

Which term is used to describe the outer layer of a muscle? (1 mark)

- a. Endomysium
- b. Epimysium
- c. Periosteum
- d. Perimysium

Q12

Which activity will predominantly recruit 'slow oxidative' motor units? (1 mark)

- a. Sprinting
- b. Throwing
- c. Walking
- d. Jumping

Q13

Which statement describes the systolic blood pressure response during exercise? (1 mark)

- a. It decreases under the influence of the autonomic nervous system
- b. It increases under the influence of the autonomic nervous system
- c. It decreases under the influence of the somatic nervous system
- d. It increases under the influence of the somatic nervous system

Q14

Which of the following muscles does NOT attach to the ribs and the iliac crest? (1 mark)

- a. External obliques
- b. Transverse abdominis
- c. Internal obliques
- d. Rectus abdominis

Q15

A benefit of core stability training is: (1 mark)

- a. Increased risk of joint laxity
- b. Reduced bone density
- c. Increased cardiac output
- d. Improved balance

Q16

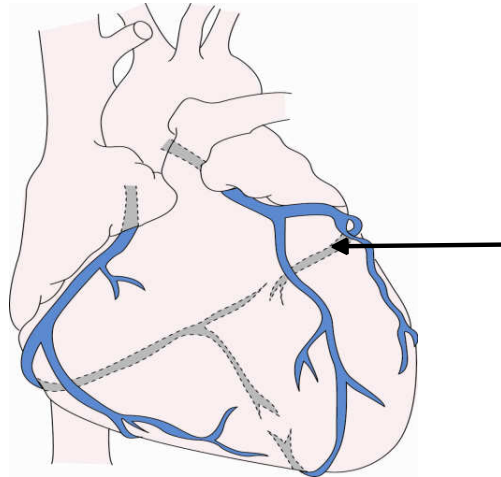
Which quadriceps muscle crosses two joints? (1 mark)

- a. Vastus intermedius
- b. Vastus medialis
- c. Vastus lateralis
- d. Rectus femoris

Q17

Which structure is the arrow pointing to? (1 mark)

- a. Circumflex artery
- b. Right coronary artery
- c. Left aortic valve
- d. Pulmonary artery



Q18

Complete the sentence: (1 mark)

The anaerobic threshold is described as the point at which _____ than it can be cleared.

- a. Heat build-up occurs slower
- b. Lactate build-up occurs slower
- c. Heat build-up occurs faster
- d. Lactate build-up occurs faster

Q19

Which statement describes the action of supraspinatus? (1 mark)

- a. Abduction of the shoulder in the frontal plane
- b. Abduction of the shoulder in the transverse plane
- c. External rotation of the humerus in the frontal plane
- d. External rotation of the humerus in the transverse plane

Q20

Plaque deposits on the walls of blood vessels may be decreased by: (1 mark)

- a. Regular consumption of red meat
- b. Genetic factors
- c. Smoking
- d. An active lifestyle

Q21

The structure of collagen fibres in a synovial joint capsule can be described as: (1 mark)

- a. Dense, elastic, regular
- b. Dense, inelastic, irregular
- c. Dense, elastic, irregular
- d. Dense, inelastic, regular

Q22

Where is the transverse abdominis located? (1 mark)

- a. Deep to the internal obliques and external obliques
- b. Superficial to the external obliques and internal obliques
- c. Deep to the external obliques and superficial to the internal obliques
- d. Superficial to the external obliques and deep to the internal obliques

Q23

What muscle contributes to extension of the vertebral column? (1 mark)

- a. Pectineus
- b. Multifidus
- c. Levator scapulae
- d. Rectus abdominis

Q24

Complete the sentence: (1 mark)

The _____ stimulates the relaxation of muscle during PNF stretching.

- a. Afferent nerve
- b. Golgi tendon organ
- c. Myosin filaments
- d. Muscle spindles

Q25

Which muscle is involved in hip abduction? (1 mark)

- a. Gracilis
- b. Piriformis
- c. Gastrocnemius
- d. Pectineus

Q26

What is the function of the spinal cord? (1 mark)

- a. To transmit information
- b. To supply blood and nutrients
- c. To supply hormones
- d. To help support the vertebral column

Q27

Which muscle helps to maintain a neutral spine position? (1 mark)

- a. Vastus medialis
- b. Tibialis anterior
- c. Quadratus lumborum
- d. Brachialis

Q28

Which action is performed by the muscle pictured below? (1 mark)

- a. Extension of the knee
- b. Flexion of the knee
- c. Abduction of the hip
- d. Adduction of the hip



Q29

Which of the following would slow down breathing rate? (1 mark)

- a. Parasympathetic action of the somatic nervous system
- b. Sympathetic action of the somatic nervous system
- c. Parasympathetic action of the autonomic nervous system
- d. Sympathetic action of the autonomic nervous system

Q30

Why is it important to maintain spine alignment when lifting equipment from the floor? (1 mark)

- a. Reduced stress on ligaments
- b. Increased stress on ligaments
- c. Reduced sacral curvature
- d. Increased sacral curvature

Q31

What is an alternative term for the semi-lunar valve? (1 mark)

- a. Tricuspid valve
- b. Bicuspid valve
- c. Aortic valve
- d. Mitral valve

Q32

Which exercise can help to correct a kyphotic posture? (1 mark)

- a. Stretching the lower portion of the trapezius
- b. Strengthening the thoracic erector spinae
- c. Strengthening rectus abdominis
- d. Stretching the lumbar multifidus

Q33

Which statement describes dendrites? (1 mark)

- a. Tree like extensions that receive information
- b. The gap between two nerve cells
- c. The fatty sheath which surrounds the axon
- d. An elongated fibre that transmits information

Q34

Arteriosclerosis can be defined as: (1 mark)

- a. Increased high density lipoprotein levels within the blood
- b. Dilation of the arterial walls during aerobic activity
- c. Diseases that cause hardening and loss of elasticity in arteries
- d. Depositing of lipids in the arterial walls

Q35

What is the contractile unit of a muscle fibre? (1 mark)

- a. Tendon
- b. Fascicle
- c. Sarcomere
- d. Endomysium

Q36

What are the characteristics of Type 1 muscle fibres? (1 mark)

- a. High force capacity, low mitochondria and low capillary density
- b. Low force capacity, high mitochondria and high capillary density
- c. Intermediate force capacity, high mitochondria and low capillary density
- d. Low force capacity, low mitochondria and high capillary density

Q37

Which statement describes a motor unit? (1 mark)

- a. A motor neuron that transmits information to the central nervous system
- b. A sensory neuron that detects muscle movement
- c. A group of muscles working together to create movement
- d. A motor neuron and all of the muscle fibres to which it connects

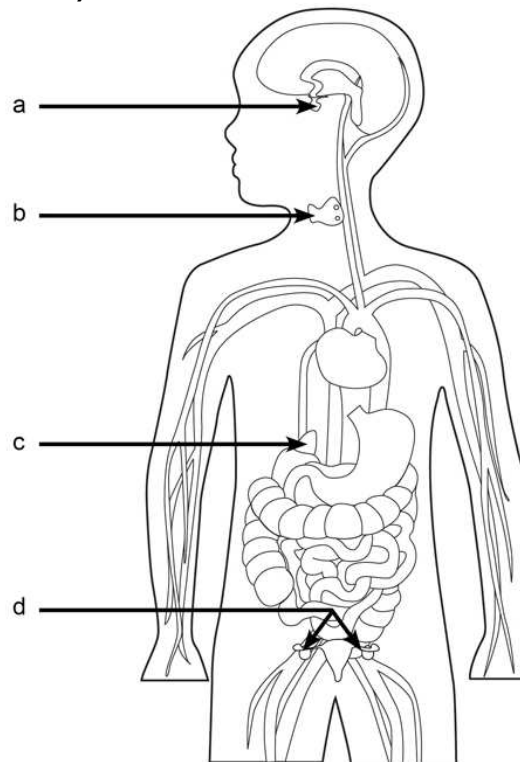
Q38

Which part of the peripheral nervous system (PNS) is responsible for controlling voluntary muscular activity? (1 mark)

- a. Parasympathetic system
- b. Sympathetic system
- c. Somatic system
- d. Autonomic system

Q39

Which gland labelled below releases hormones that stimulate the breakdown of Glycogen to Glucose? (1 mark)



Q40

Which reaction is caused by the release of epinephrine? (1 mark)

- a. Increased body fat deposits
- b. Increased breathing rate
- c. Decreased muscle mass
- d. Decreased heart rate