

**GAUTENG DEPARTMENT OF EDUCATION  
SENIOR CERTIFICATE EXAMINATION**

**DANCE HG  
(Second Paper)**

**SECTION A  
ANATOMY**

**QUESTION 1**

- |     |       |   |             |
|-----|-------|---|-------------|
| 1.1 | (a)   | The main muscle that contracts to perform an action                 | 0.5x2=(1)   |
|     | (b)   | A muscle that aids/helps the agonist to perform an action           | 0.5x2=(1)   |
|     | (c)   | The muscle that performs the opposite action to that of the agonist | 0.5x2=(1)   |
|     | (d)   | The point of attachment where movement occurs                       | 0.5x2=(1)   |
| 1.2 | 1.2.1 | Isotonic concentric: muscle contraction where the muscle shortens   | 1x2=(2)     |
|     | 1.2.2 | Isotonic eccentric: muscle contraction where the muscle lengthens   | 1x2=(2)     |
|     | 1.2.3 | Isometric: muscle contracts, but no movement takes place            | 1x2=(2)     |
|     |       |   | <b>[10]</b> |

**QUESTION 2**

- |     |   |         |             |
|-----|---|---------|-------------|
| 2.1 | Trapezius.  |         | (0.5)       |
| 2.2 | Origin: outer third of clavicle, acromion process and spine of scapula.<br>Insertion: lateral surface of humerus.                                 |         | 0.5x4=(2)   |
| 2.3 | Iliopsoas, rectus femoris, adductor longus, adductor brevis, adductor magnus, pectineus, gracilis.  | (Any 6) | 0.5x6=(3)   |
| 2.4 | Sartorius, gluteus maximus, adductor longus, adductor brevis, adductor magnus, pectineus, gracilis  | (Any 6) | 0.5x6=(3)   |
| 2.5 | Either: Origin: 2 heads from medial and lateral condyles of femur.<br>Or<br>Origin: 2 heads from tibia and fibula.<br>Insertion: Achilles Tendon. | (Any 6) | 0.5x3=(1.5) |
|     |   |         | <b>[10]</b> |

**QUESTION 3**

- 3.1 Plantar flexion (0.5) of the ankle joint will be brought about by the soleus (0.5) and gastrocnemius (0.5) contracting concentrically (0.5). The antagonist (0.5) for this action will be the tibialis anterior (0.5), although it will contract in order to counteract any backwards sway (0.5). Hamstrings (0.5) will contract to counteract any forwards sway (0.5). The correct tilt of the pelvis will be maintained (0.5) by the interaction between the hip flexors (0.5) and hip extensors (0.5), and stability at the knee joint (0.5) is brought about by isometric contraction (0.5) of the quadriceps (0.5). *Any 6 facts and other logical answers pertaining to the action below the waist.* 0.5x6=(3)
- 3.2 Turnout (0.5) will be brought about and maintained by the adductors (0.5), sartorius (0.5) and gluteus maximus (0.5). The agonists for hip flexion (0.5) will be the iliopsoas (0.5) and rectus femoris (0.5). Knee flexion (0.5) will be brought about by concentric contraction (0.5) of the hamstrings (0.5), and plantar flexion (0.5) of the ankle joint will be brought about by the concentric contraction (0.5) of the soleus (0.5). The intrinsic muscles of the foot (0.5) will also be contracting concentrically (0.5) to increase the arch of the foot (0.5). *Any 8 of the above facts and other logical answers pertaining to the working leg.* 0.5x8=(4)
- 3.3 Shoulder flexion (0.5) will be brought about by the concentric contraction (0.5) of the pectoralis major (0.5) and the anterior deltoid (0.5). Biceps (0.5) will synergise (0.5) this movement. Superior and anterior deltoid fibres (0.5) will continue the movement of the arm to above the head (0.5). Trapezius (0.5) and latissimus dorsi (0.5) will be contracting isometrically (0.5) to this point in order to stabilise the shoulder girdle (0.5). During the backbend, the erector spinae (0.5) will be contracting concentrically (0.5) to bring about hyper-extension of the spine (0.5), while rectus abdominus (0.5) will be contracting eccentrically (0.5) to control the movement (0.5). *Any 6 of the above facts and other logical answers pertaining to the specified movement.* 0.5x6=(3)  
[10]
- TOTAL FOR SECTION A: [30]**

**SECTION B****QUESTION 4**

## 4.1

- Ice
- Elevation
- Rest
- Compression

0.5x4=(2)

## 4.2

- As soon as the injury has occurred
- Ice should be applied to and around the area.
- The icing should be accompanied by elevation of the injured part.
- This will discourage swelling.
- Most dancers' injuries occur in lower extremities.
- When leg is elevated then gravity will assist in the drainage of fluid from injured part.
- Rest will encourage early healing.
- Stop the class or performance immediately.
- Don't stand or walk on injured part.
- Once home, continue ice and elevation.
- Firm bandaging will compress the area.
- This reduces swelling and bleeding in injured part.
- Compression should neither be too long nor too extensive.
- In the case of mild sprain, can keep the strapping on in class for support.
- Be careful not to disguise pain with tablets or injections.
- Pain is body's way of alerting.
- To perform in this state will only prolong injury.

0.5x12=(6)

## 4.3

- The development and maintenance of muscle strength
- The development and maintenance of joint mobility
- The preservation of cardio-respiratory fitness
- Good nutrition
- A good stretch regime

0.5x4=(2)  
[10]**QUESTION 5**

## 5.1

- This form increases strength
- Increases muscular tolerance for exercise
- Increases endurance ability
- Increases stamina, thus period of training without fatigue
- Improves body shape by improving muscle tone
- Weight loss
- Increase in lung capacity
- A lower resting pulse-rate
- A general feeling of well-being owing to endorphin rush

0.5x8=(4)

## 5.2

- Through forms of resistance
- Gravity with use of own body
- Weights, loading the muscles will increase strength
- Repetition
- Speed
- Length of activity i.e. duration

0.5x6=(3)

## 5.3

- This is when a muscle group is rapidly moved
- Through its fullest range of motion.
- Movement in correctly placed and extended position.
- Dancer is generally not aware that stretch is taking place.
- Grand battement will stretch the hamstrings
- and the hip area.

0.5x6=(3)  
[10]

## QUESTION 6

## 6.1

- Required for muscle and tissue development
- And repair.
- Dancers need the correct balance of protein, fats and carbohydrates.
- Food is main source of energy and fuel.
- In order to dance well, you need energy and reserves.
- Need correct foods that enhance performance and improve energy levels.
- Needs to be low kilo joule for aesthetic value.
- Decreases probability of injury

0.5x6=(3)

## 6.2

- Sugars are the simplest form.
- Starches are complex.
- All carbohydrates have to be broken down into simplest sugar
- Before being burnt as energy.
- Sugars give you instant energy
- As they are metabolised and burnt quickly.
- Starches metabolise slowly
- And the energy is released slowly.
- So, sugars will give you a quick boost and then it will be over.
- Not useful to the dancer.
- Starches will allow for longer energy and concentration.
- Any sugar which is not burnt will turn to fat.
- Sugars, chocolates, coke, pastries, etc.
- Starches: bananas, pasta, bread, etc.

0.5x6=(3)

## 6.3

- Fat is the most important source of energy.
- Dancers think that fat will make them fat.
- A complete fat-free diet can be damaging to
- Muscles and tissues.
- Fats serve as carriers of Vit. A, D, E & K.
- Certain essential fatty acids cannot be manufactured by the body, e.g. Omega-3 fatty acids.

0.5x4=(2)

## 6.4

- Essential in proper functioning of body.
- Often dancer's diet is insufficient
- Therefore lacks natural normal intake.
- Menstruating dancers should supplement with iron.
- Immune boosting
- Vit. B brain functioning and concentration.
- Modern methods of cooking reduce vitamin content.
- Stressful lifestyles increase vitamin usage.
- Antioxidants are free-radical scavengers and free radicals are the disease-causing breakdown products of metabolism.
- Vit. E essential for healing and muscle repair.

0.5x4=(2)  
[10]**TOTAL FOR SECTION B: [30]****TOTAL: 60**