

**GAUTENG DEPARTMENT OF EDUCATION  
SENIOR CERTIFICATE EXAMINATION**

**DANCE SG  
(Second Paper)**

**POSSIBLE ANSWERS OCT / NOV 2006**

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**SECTION A  
ANATOMY**

**QUESTION 1**

- 1.1 One word for a definition
- |       |             |               |
|-------|-------------|---------------|
| 1.1.1 | Agonist     | (0.5 x 2) = 1 |
| 1.1.2 | Origin      | (0.5 x 2) = 1 |
| 1.1.3 | Aponeurosis | (0.5 x 2) = 1 |
| 1.1.4 | Synergist   | (0.5 x 2) = 1 |
- 1.2 An engram is a neural passageway formed in the brain (0.5). It is developed by numerous repetitions (0.5). Exact, constant and accurate (0.5) repetition must be achieved from the beginning of a dancer's training (0.5). An engram is positive because it allows a movement to be performed faster than if conscious thought is required (0.5). If inaccuracies develop and are constantly repeated, these faults themselves become the engrams (the forming of a bad habit) (0.5), this is then the negative of an engram. (0.5 x 6) = 3
- 1.3 Isotonic eccentric (0.5 x 2) = 1  
**[8]**

**QUESTION 2**

- |     |  |                             |
|-----|--|-----------------------------|
| 2.1 | Semimembranosus, semitendinosus and biceps femoris   | (0.5 x 3) = 1.5             |
| 2.2 | Soleus (0.5) – Origin: 2 heads from the tibia (0.5) and fibula (0.5).  | (0.5 x 3) = 1.5             |
| 2.3 | Gastrocnemius  | (0.5 x 2) = 1               |
| 2.4 | Extension (0.5) at the knee joints (0.5)   | (0.5 x 2) = 1               |
| 2.5 | Latissimus dorsi   | (0.5 x 2) = 1               |
| 2.6 | Origin: Lower six thoracic vertebrae (0.5), lumbar vertebrae (0.5) and iliac crest (0.5)<br>Insertion: Humerus (0.5) and some slips onto the inferior angle of the scapula (0.5) | (0.5 x 4) = 2<br><b>[8]</b> |

**QUESTION 3**

- 3.1 Turnout 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 of the hamstrings (0.5), and plantarflexion of the ankle joint (0.5) will be brought about by the concentric contraction of the soleus (0.5). The intrinsic muscles of the foot will also be contracting concentrically (0.5) to increase the arch of the foot (0.5). Any EIGHT facts (0.5 x 8) = 4
- 3.2 The trapezius (0.5) and latissimus dorsi (0.5) will be contracting isometrically to fixate the shoulder girdle (0.5). The deltoid (0.5) and biceps (0.5) also contract isometrically to maintain the position (0.5). The correct alignment of the pelvic girdle in relation to the shoulder girdle is maintained by the interaction between the rectus abdominus (0.5) and erector spinae (0.5). The correct tilt of the pelvis is maintained by the relationship between the gluteal muscles (0.5) and hamstrings (0.5) posteriorly and the rectus abdominus (0.5) and iliopsoas anteriorly (0.5). To side bend, the right (0.5) internal and external obliques (0.5) will contract concentrically (0.5). Latissimus dorsi (0.5) and erector spinae (0.5) on the right will synergise (0.5) this movement. The transverses (0.5) will also be contracting concentrically to keep the stomach flat (0.5). Any FOUR facts (0.5 x 4) = 2  
[6]

**TOTAL FOR SECTION A: [22]****SECTION B  
HEALTH CARE****QUESTION 4**

- 4.1 Treatment of twisted ankle (prior to doctor). Any SIX of the following
- Rest: Treatment is initially rest to minimise the amount of bleeding
  - And to prevent any further tearing or bruising
  - Ice: Application of ice will help to decrease bleeding and swelling
  - Compression: Compression will decrease pressure to injured part and may help alleviate pain and bruising
  - Elevation: Elevate the leg so that it is above your heart, this will lessen the swelling
  - Determine the degree of the injury: The tear might be central within the substance of the muscle, or it may be peripheral (the latter tends to cause less pain), or there may be ligament and soft tissue damage
  - Follow-up exercise: As the condition settles, gradual increase in activity is suggested. The degree of exercise, however, must be regulated by pain.
  - Physiotherapy, ultrasound
  - Anti-inflammatory medication
- (0.5 x 6) = 3

4.2 Local side effects of a twisted ankle. Any SIX of the following:

- Decrease in cardio-respiratory fitness
- Generalised muscle wasting
- Increase in body weight
- Psychological effects
- Feeling of not belonging and no self worth
- Depression
- Persistent swelling
- Chronic pain and injury
- Loss of technical ability
- Insomnia
- Loss of extension and suppleness

(0.5 x 6) = 3

4.2 Prevention of further injuries. Any FOUR of the following:

- 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
- Working and dancing intelligently
- Listening to your body and being aware of pain and signs that might become something more severe
- Don't overdo your training and know the signs of exhaustion

(0.5 x 4) = 2  
[8]

### QUESTION 5

5.1 How to become supple. Any SIX answers (half a mark each)

- The warm up stretch is always valuable and prepares the body and muscles for more strenuous work.
- In fact this stretch is essential.
- Gently stretch out the muscles while they are still cold, starting with the ones that work the hardest, e.g. calf, hamstrings, quads and adductors
- This now aids progression with ease to more difficult steps.
- The "dynamic ballistic stretch" is very valuable to the dancer and is seen best when,
- A muscle group is rapidly moved through its fullest range of motion and is
- Bounced or stretched, e.g. a "grande battement".
- Static stretching is known as stretching the muscle to its functional long point.
- This is commonly seen in a stretch such as the
- "splits", "shouldering the leg",
- or any position that extends the joints, muscles and ligaments beyond
- their natural physical range.

- The muscles should relax into the stretch without tension.
- A dancer needs to stretch very gently, avoiding the stretch reflex, so that the muscles can lengthen unguarded to their fullest extent.
- Ideally one should hold any stretch for at least a minute to obtain maximal effects.
- Stretching with an elastic band (as a form of resistance) improves your mobility and range even further.
- One should be dedicated and stretch as part of your cool down and stretching should take place at least three times a day.
- One should avoid bouncing in any stretch.

(0.5 x 6) = 3

5.2 Benefits of stretching. Any FOUR answers (half a mark each).

- Improves performance levels
- An elastic muscle is a strong muscle
- Increases the range of motion and movement
- Muscle can lengthen eccentrically much farther
- Reduces muscle tension and acts as transition to a resting state after exercise
- Prevents injury
- Improves body awareness
- Promotes circulation and effective in removing waste products
- Improves reaction time of motion
- And is highly effective in creating aesthetic beauty and line.
- Stretching enables the dancer to perform difficult steps and routines with ease.
- This eradicates the stiff and agonising look of the dance movement.
- All movement flows when the body is flexible,
- And there is continuity without jerky, hindering movements.

(0.5 x 4) = 2

5.3 How to improve fitness. Any SIX answers (half a mark each).

- They are strengthened by adding a stimulus such as weight
- They are strengthened in the presence of resistance
- This can be an actual weight
- Or the use of gravity and the body
- Or water
- The muscle adapts to the demands made on it and is strengthened
- The more it is repeated the stronger it becomes
- The faster
- The longer
- The heart and lungs are muscles
- As they become stronger and fitter
- So you become fitter and endurance increases

- If a dancer is not fit and physically strong then it will be very difficult for the dancer to deliver a controlled performance
  - It is essential that a dancer incorporate some strengthening exercises into their regime.
  - These include weight training
  - And aerobic activity lasting 20 min or more
- (0.5 x 6) = 3  
**[8]**

### QUESTION 6

6.1 Carbohydrates that provide lasting energy

- Complex Carbohydrates 0.5

6.2 THREE examples of complex carbohydrates. Any THREE answers.

- Wholemeal bread
  - Pasta
  - Cereals
  - Bananas
- (0.5x3)= 1.5

6.3 Pre-performance intake. Any SIX answers.

This is an open-ended question and is very particular to individual, but there are certain factors which should be common.

- Dancer should be well hydrated throughout the day
  - Avoid too many simple sugars
  - As these will only allow for a peak of blood sugar and energy
  - And then a sudden drop
  - You need the complex kind which are released slowly
  - Breads, cereals, bananas and other fruits with natural fructose
  - Pasta
  - Nothing that will make you gassy e.g. beans, onions
  - A large meal is not ideal and dancer should be eating constantly like this throughout day
  - Make sure a meal has had time to digest and does not repeat on you.
- (0.5 x 6) = 3

6.4 Importance to drink water throughout the day. Any FOUR answers.

- Water is absolutely essential for all bodily processes.
- Water regulates the body temperature.
- As dancers we perspire more than the average person and need to replenish the lost water.
- This combats dehydration.
- Dehydration is a very serious condition and in extreme cases can lead to death.
- Therefore it is vitally important to replace the water throughout the day.
- Dehydration in mild cases can result in cramp, nausea
- Exhaustion and fatigue
- A dancer obviously needs to avoid any of these conditions. (0.5 x 4) = 2

**[7]**

**TOTAL FOR SECTION B: [23]**

**TOTAL: 45**