GAUTENG DEPARTMENT OF EDUCATION
SENIOR CERTIFICATE EXAMINATION

POSSIBLE ANSWERS FOR : DANCE HG (Second Paper)

1.1.1	Tendon	0.5x2=	(1)
1.1.2	Synergists	0.5x2=	(1)
1.1.3	Periosteum	0.5x2=	(1)
1.1.4	Antaonists	0.5x2=	(1)
1.1.5	Perimysium	0.5x2=	(1)

1.2.1 The abdominals (0.5) will be contracting isotonic eccentrically (0.5), which is when the muscle contracts but lengthens as well (0.5).
Erector spinae (0.5) will be contracting isotonic concentrically (0.5), which is when the muscle contracts and shortens (0.5) 0.5x6= (3)

1.2.2 An engram is a neural passageway that is formed in the brain (0.5) when a movement is repeated (0.5) often. The brain then memorises the movement and performs it automatically (0.5). Bad technique would have to be corrected from scratch in order to form new neural passageways (0.5) that will override the old ones. 0.5x4= (2)

[10]

QUESTION 2

2.1 Iliacus (0.5), Psoas major (0.5) and Rectus femoris (0.5) 0.5x3= (1.5)

2.2 Concentric contraction (0.5)

2.3 Trapezius (0.5): Origin: Base of the skull (0.5)
Spines of vertebrae to T12 (0.5)

Insertion: Upper fibres – clavicle (0.5)
Middle fibres – acromion process of scapula (0.5)
Lower fibres – spine of scapula (0.5)

Latissimus dorsi (0.5): Origin: Lower 6 thoracic vertebrae (0.5)
Lumber vertebrae (0.5)
Iliac crest (0.5)

Insertion: Bicipital groove of humerus (0.5)
Some slips onto inferior angle of scapula (0.5) 0.5x10= (5)

2.4 Gluteals (0.5) Insertion: Maximus – iliotibial tract (0.5) and back of shaft of femur (0.5)
Medius and minimus – outer surface of greater trochanter (0.5)

Sartorius (0.5) Insertion: Medial surface of upper end of tibia (0.5)

Adductors (0.5) Insertion: Gracilis – medial condyle of tibia (0.5)
Others – back of femur (0.5)

Any 2 muscles insertions 0.5x6= (3)

[10]

QUESTION 3

3.1 Turnout is brought about and maintained by the sartorius (0.5), adductors (0.5) and gluteals (0.5). Flexion of the hip (0.5) is brought about by concentric contraction of the iliopsoas muscle (0.5) as well as the rectus femoris (0.5). Knee flexion is brought about by the contraction of the hamstrings (0.5), and plantarflexion of the foot is brought about by the contraction of the soleus (0.5), while the intrinsic muscles contract to point the foot (0.5). **Any 5 facts and other logical answers.** 0.5x5= (2.5)

3.2 Gravity initiates the knee beng (0.5). Hip, knee and ankle flexion are therefore all passive movements (0.5). Quadriceps contract eccentrically to control the move (0.5). Soleus contracts eccentrically (0.5). Tibialis anterior contracts concentrically to stabilise (0.5), and the intrinsic muscles of the foot lift the arch (0.5) and prevent the foot from rolling (0.5). **Any 5 facts and other logical answers.** 0.5x5= (2.5)

3.3 Erector spinae (0.5) contracts eccentrically (0.5), while the trapezius (0.5) and latissimus dorsi (0.5) keep the shoulder girdle down and stabilised (0.5). Rectus abdominus (0.5) flexes the trunk over the pelvis (0.5). **Any 5 facts and other logical answers, including muscles used to stabilise the pelvis.** 0.5x5= (2.5)

3.4 Arms are flexed (0.5) and adducted (0.5) by the pectoralis major (0.5), and deltoid (0.5) to form the circle. Muscles that will synergise this movement will be biceps (0.5). The muscles on the anterior aspect of the forearm (0.5) will contract to bring about flexion of the wrist (0.5). **Any 5 facts and other logical answers.** 0.5x5= (2.5)

[10]

TOTAL FOR SECTION A: [30]

SECTION B
HEALTH CARE

QUESTION 4

4.1
- This condition often arises in a mature dancer or dance teacher
- Who is not in full training.
- They demonstrate a large jump and the muscles and
- Tendons are unaccustomed to this sudden exertion.
- Main cause is a sudden, violent
- Contraction of muscle and tendon.
- Could also be caused by a dancer missing their footing.
- Could be a partial or full rupture.
- Dancer may actually hear or feel this tear or snap.
- Total rupture is uncommon, but not unheard of.

4.2
- Occasionally surgical repair is needed to sew or
- Knit the tendon again.
- Immediate consultation with a professional
- If a partial rupture, rest with
- Immobilisation is required.
- If inadequate rest is not adopted this injury could become
- Chronic.
- Before professional can be seen, apply ice to reduce swelling

- Elevate the affected area.

QUESTION 5

5.1
- AEROBIC
- ANAEROBIC

5.2
- Aerobic exercise is also known as endurance training.
- Anaerobic exercise is referred to as strength training.
- Aerobic: is the ability of the body, e.g. the heart and lungs to continue exercising.
- In other words any form of exercise that challenges the
- Heart and lungs.
- Anaerobic exercise is the ability of the muscles to contract not repeatedly as in endurance training.
- But in one maximal effort.
- Aerobic exercise makes one fiter and stronger through a series of
- repetitive movements
- Using different methods of resistance.
- Aerobic exercise is performed over long periods of time with the minimum being 20 min.
- This is known as cardiovascular training.
- Anaerobic exercise happens in short powerful bursts of strength and power, giving it one maximal shot in one go.

5.3
- Aerobic – dancing, aerobics, running, boxing, swimming
- Anaerobic – power lifting, bodybuilding, sprinting

QUESTION 6

- As dancers we are looking for a diet that provides us with power and stamina
- But still presents us with a sleek, light weight appearance.
- This diet should be calorie low but
- Nutritionally rich.

- It is generally believed that a dancer needs around 2 000 calories a day.
- These calories should be made up of a balanced amount from each of the main food groups.
- Namely, milk, meat, fruit and vegetable group.
- every meal should include: carbohydrate
- fat
- protein
- There are two types of carbohydrates, simple and complex.
- Carbohydrates are considered the efficient form of fuel for muscle.
- And therefore a major source of energy.
- Simple carbs are absorbed very quickly, giving a short burst of energy that only lasts a short while before dipping the blood sugar level again.
- Note: if these simple carbs are not burnt i.e. used as fuel, they are converted into FAT.
- The best form of carbs is found in wholemeal bread, pasta, cereals and nuts.
- A dancer should not think to cut out fat altogether from their diets as it is.
- The most important source of stored energy.
- Obviously as a dancer trying to lose weight it is important to steer clear of fatty and processed foods such as pastries, crisps, fast-food.
- This dancer should stick to fruits, vegetables, wholegrain starches.
- Protein is important as it contributes to growth, maintenance and repair of human tissue (muscle).
- If the body is lacking in protein, the body will start to break down its own muscle tissue.
- This obviously leads to weakness.
- Decrease meat intake and rather eat fish or chicken.
- Avoid sugary and fried foods.
- Limit salt and caffeine.

- Eat when relaxed and hungry.
- Drink more than enough water to keep the body fully rehydrated.
- And remember: your intake of food should not exceed your output of energy.