Instructions to candidates:
- You have 90 minutes to complete this paper
- You must answer all questions (approximately 15 minutes per question)
- The maximum mark for each question is shown

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<th>PASS MARK: 36 (60%)</th>
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<td>Give 5 examples of how you could introduce young gymnasts to work with music in preparation for display items.</td>
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Guidance to candidate
- If it says technique, then give technique only and not method etc.
- Method means progression; these should be done in a progressive order; if teaching a tuck back somersault you wouldn’t do a supported somersault and then go back to learning the tuck shape.
- If it asks for 5 of something don’t do 6 or 7. They won’t be considered and may even go against you as they may show a weakness in your knowledge.
- When doing drawings try and make them as clear as possible.
- Always make your answer specific to the question safety for the trampoline if talking about discipline then it should be related to the trampoline and not just the training of gymnasts generally.
- Time yourself so you allow enough time for each question. The examiner expects some depth to each answer.
- Don’t use colloquial names for apparatus or practises; describe or draw.
- Remember: you are meant to show the examiner your knowledge, to say good is not sufficient; what is good in the case of a round off or back flip. If the question is on technique then the examiner needs to know what good is.
**AGE & STAGE OF MATURATION**

1. It is generally accepted that pubescent teenagers can create some problems. Outline 2 such problems that could occur and give possible solutions for each through gymnastics.

1. Some boy gymnasts are becoming sullen and are not interested in anything.
   Solution.
   Create a display team with vaulting and tumbling. An exciting and slightly risky activity may be the outlet that they need.

2. A group of girls are becoming increasingly withdrawn through their increase in size and weight.
   Solution  
   1st solution  
   Run a class that is at a time when they feel none threatened by their peers, perhaps when very young gymnasts are training.  
   2nd solution  
   Encourage them to come and help coach other children so that they can always be clad in tracksuits etc. It may also be possible to introduce another activity to them where they don’t have to work so hard, such as trampolining.  
   3. They may also be very capable of helping with choreography for display items or younger gymnasts’ floor exercises.

**Biomechanics**

2. Explain how rotation is set up and controlled in a running tucked front somersault.

The gymnast creates forward momentum by running forwards. As the feet stop as he/she hurdle steps to join the feet together so rotation is set up by the body rotating around the pivot point.

The gymnast then jumps from the floor so the rotation then happens in the air, the height depending upon the thrust from the floor and also the relationship of the gymnast’s body with the placement of the feet.

If the feet are slightly in front of the body then the forward somersault will be high. If the feet are behind the body when they join together on the floor the gymnast will be very low and rotate quickly to the floor.

Rotation is also set up by the shape of the gymnast as the feet touch to floor.
This shape as shown will set up a force which goes outside the centre of mass and therefore set up forward rotation. This is called eccentric thrust or a torque.

As soon as the gymnast leaves the floor, the flight path of the centre of mass is fixed. However the gymnast can control the speed of the forward rotation. From an extended position the gymnast then tucks which increases the angular velocity. The gymnast must then judge their position in the air and open the body at a time which will slow the body down sufficiently to have a safe landing.

**TECHNIQUE**

3. Describe the technique of the yamashita vault.

The gymnast needs a fast run up. He/she should hit the board with the arms coming from behind the hips to swing forwards so that they are extended by the ears in 1st flight. The gymnast needs to aim for a low strike position on the vaulting platform. This could be as low as 45º measured from the hands and through the centre of mass.

The arm swing should occur slightly earlier than in a handspring, this is because the 1st flight is lower and so gymnast needs to get to the platform earlier.

A slightly hollow position or dropped chest action is favoured on strike as this can be advantageous to the height of the 2nd flight.

On striking the platform the gymnast must be strong enough through the shoulders to be able to push out off the apparatus (to try and overcome the force of gravity) and then to extend the body through a handstand shape. The gymnast should leave the horse ideally just before the vertical. From the extended shape the gymnast then pikes aiming to bring the chest to the legs (it almost looks as though the legs stop moving)

During the pike phase the gymnast angular moment increase, he/she rotates forwards more quickly. The arms are taken out to the side horizontal which will also increase the speed of rotation. As the gymnast rotates towards the horizontal so he/she must extend the body so a good phase of extension is shown before landing. The arms are brought upwards towards the head which helps slow down rotation

**Teaching methods**
4. Describe a progression for each of partner balances shown. Explain how you ensure the safety of the gymnasts for each skill.

1. Base kneels down in front of a platform. Top stands on platform and then grasps base’s hands and steps onto base’s shoulders. This can be done with the coach standing by or a safety mat placed in front.

2. Base lies on back with legs vertical. Partner can stand on platform and then press down on base’s feet or base can balance a fairly heavy object on the feet, even a small landing mat (4 cms depth)

Safety for 1st balance.
The top must be suited in size to the base, not too big. The base must be physically prepared and have had experience of supporting tops as described previously. The correct technique must be used, the correct hand grip. Other groups or gymnasts should not be close to the pair. A safety mat should be in place for 1st attempts with the coach standing close. The base should be standing on a firm surface. The top should have good body tension and be used to standing up high unaided.

Safety for 2nd balance.
The top can be the same size as the base but it’s not a good idea for the top to be much bigger. The base must be supple enough in the hamstrings in order to hold the legs vertical. He/she must be strong enough in the legs; the legs must be locked with the hips on the floor. The top must be prepared physically with good body tension particularly in the gluteals and back in order to hold the body straight. There should be no other groups or gymnasts around. A safety mat can be used for 1st attempts. The base should be lying on a firm surface.

SPECIFIC PHYSICAL PREPARATION
5. Give 4 physical preparation exercises for the handspring vault. Indicate which muscle groups or area is being prepared with each exercise and which part of the skill this exercise serves.

1. Running up a slope or running with aerobic weights around the waist. This will increase the strength of the legs for the run up. This will include the quadriceps and the soleus (calf muscles)

2. In handstand gymnast does handstand dips using the shoulder joint only (no bending of the arms) Small aerobic weights can be attached to the gymnast, waist or ankles. This action should be done quickly in order to try and mimic the speed of repulsion from the top of the horse. This will increase the strength in the shoulders, the rotator cuff and the levator scapula and the upper fibres of trapezius.

3. Holding front support position with a small weight around the waist. This isometric action will aid the gymnast during the flight phases as well as the support phases. It will particularly improve the tension for the mid body area as well as the quads keeping the legs straight (It is better if the ankles are stretched so weight is on the front of the toes only.)
Isometric contraction is needed particularly in the abdominals and quads as well as the gluteals. Also helps strength in the arms.

4. Partner sits on gymnast’s shoulders. Gymnast rests hands on wall bars and bends legs slowly to just above 90° and then straightens. Repeats action 5 or 10 times. This will strengthen the legs for landing, eccentric muscle action. The muscles being used are quadriceps and soleus. When the legs are straightened the muscle work concentrically.

**General.**

6. **Give 5 examples of how you could introduce young gymnasts to work with music in preparation for display items.**

1. A first method of using music is for gymnasts to march to music. Use music with a good beat, either a march or something with a regular rhythm a 4 4 beat that’s has a catchy modern sound. Make sure that gymnasts are on the beat and use the arms in opposition. Change the direction of marching to keep their interest, marching alone or in pairs or groups.

2. Using some smoother music introduce a sway action. This can be done with gymnast in various positions, sitting down and then standing with legs apart. They sway their bodies from side to side firstly with hands on hips and then with arms moving to each side to extend the action. Get gymnasts to work together in pairs.

3. Running to music; get gymnasts to change direction, again working with partner or groups. Make sure that they run on the toes. The hands could be placed on the hips at the beginning and then later some changes in arm positions can be introduced. Can also use a circle, round around holding hands or running in to a tight circle and then outwards.

4. Working simple floor skills to music for example handstand forward roll step out to cartwheel one side, then cartwheel the other side. Choose music carefully so that gymnasts are able to hear a beat which will keep them in time with the music. Gymnasts can work alongside one another so that they can watch one another and help each other to keep in time.

5. Changing shape with arms. Gymnasts can either be standing or kneeling. Start with straight arms forwards, then side, then above head. Use a strong beat to encourage them to have strong arms. Can also use a clenched fist and then extend the fingers at end of position. With softer music introduce rounded arms as in classical dance. Introduce asymmetrical position of the arms, one arm forward, and one arm to the side. Later these positions can be done coupled with changes in body shape. Changes in arm position done by a mass group can look very effective.