

# MAT APPRENTICE PRACTICE TEST - ANSWERS

1. Name the 5 core structures in the pelvic lumbo hip area.

**ANSWER**

*Diaphragm, Pelvic floor, multifidus, Transverse Abdominus, Psoas Major (the medial posterior fibers of the psoas major)*

2. As movement therapist why do we concentrate on these 5 core players.

**ANSWER**

*Our center of gravity is held here and this area is where all movement should be initiated from.*

3. What sits on top of the Diaphragm?

**Answer**

*Lungs and the heart*

4. What is directly below the Diaphragm?

**Answer**

*Stomach, Spleen, Liver, Intestines, Pelvic Organs*

5. How are the answers from questions 3 and 4 connected?

**Answer**

*Baggies of connective tissue surround the heart and the lungs and these are the same baggies or connective tissue that surround the diaphragm and this all blends into and is connected to the Peritoneum (a serous envelope that wraps most of the abdominal organs)*

6. What does the Psoas Major blend with and become as it travels down the leg?

**Answer**

*It blends with the Iliacus muscle and at that point it is called the iliopsoas.*

7. What is the job of the multifidus in the lower spine?

**Answer**

***Anti rotator***

8. How does that job change in the mid and upper back?

***Answer***

***It encourages rotation in the mid and upper back.***

9. Name 2 superficial hip flexors.

***Answer***

***Rectus Femoris, Sartorius, Tensor Fasciae Latae, Gluteus Medius (anterior fibers), Gluteus Minimus***

10. Describe Diaphragmatic and Lateral Rib Breathing. What are the differences between the two?

***Answer***

***Diaphragmatic breath or Belly breath creates glide in the diaphragm, creates more endorphins and creates a very distinct contraction of the TA on the exhale. On the inhale you send the breath into your belly and on the exhale the bikini line abdominal is drawn in and across the front of the pelvis.***

***Lateral Ribcage breathing is the traditional breath taught in Pilates and this is an abdominal (TA) strengthening breath. The inhale is sent into the back/sides of the ribs while the abdominals are drawn in flattened not scooped). The exhale should increase or reinforce the contraction and the flattening on the TA. If one is able to hold this breath cycle for 10 consecutive inhales and exhales we know they have gained strength and intelligence with their TA muscle. The breath should always be balanced and using different breath techniques is always preferred.***

11. What is an example situation where you might cue for an imprinted spine?

***Answer***

***Usually when performing challenging abdominal exercises the low back will remain in contact with the mat throughout the exercise. Clients that are comfortable in flexion and have good range of motion in lumbar flexion do well with this position. Medical conditions that generally prefer an imprinted position include some sacroiliac dysfunctions, facet joint syndrome, spinal stenosis and spondylolisthesis.***

12. What is a situation where you might use a supported neutral?

**Answer**

*This can help people with tight backs to learn how to use the abdominals in a more effective way. It also helps clients to feel the positioning of their backs and how to stabilize. Medical conditions that generally prefer a supported neutral include some sacroiliac joint dysfunctions and some lumbar disc injuries.*

13. What does Differentiation mean?

**Answer**

*To perceive or show the difference in or between. To discriminate.*

14. How do we incorporate it into Pilates training? Give an example.

**Answer**

*When we talk about differentiation in Pilates we look at what we are stabilizing and what we are moving.*

*Many people that come in for training don't realize that the pelvis and leg can move independently of each other. A big part of their training is learning to stabilize the pelvis while moving freely in the leg and vice versa.*

15. What is Lumbo Pelvic Stability?

**Answer**

*It is related to core strength, abdominal strength and the strength and balance of the sling system of outer musculature that attaches to the spine and pelvis.*

16. Name the 4 sling systems that are involved.

**Answer**

*The anterior oblique sling or system, The posterior oblique sling, The deep longitudinal sling and the lateral sling.*

17. What are some examples of mat exercises that someone with osteoporosis can be safe doing? What movements specifically should you avoid, and what areas of the body should you be careful with?

**Answer**

*Any of the exercises that involve spinal extension like mini swan and swan are appropriate and encouraged. Also any spinal stability exercises are great for bone health as long as the spine is not in forward flexion. This includes marching, opposite arm and leg lift, and side leg series. The areas of the body that you will find that your clients with osteoporosis will have trouble with is their spine, the neck of the femur, and wrists. Be sure to prop and modify the body where they need the extra support.*

18. What exercises in the mat repertoire focus primarily on the strength of the legs?

**Answer-**

***Clam, side leg series and pelvic bridging.***

19. What are some of the Pilates mat exercises that would need to be modified for a client who has a tight posterior pelvic floor and hamstrings? How would you do this?

**Answer**

***Any of the seated work such as spine stretch, twist, and saw. It is helpful to bolster them up on a few blankets, as well as ask them to bend their knees a bit to find better alignment. Also single leg circle, open leg rocker, and corkscrew would require them to bend their knees to take the pressure off of their pelvis and hip flexors.***

20. Please outline a classical order for a level beginner on the mat.

**Answer**

***100, Roll up, Leg circles, Rolling like a ball, Single leg stretch, Spine stretch forward, Saw, Swan, Side leg series, Seal, Push ups.***

21. How would you modify the above sequence for a client with shoulder tightness?

**Answer**

***Watch for scapular alignment even in the 100's. You may need to take out the arm pumps. In Spine stretch forward, you would want to either keep the hands on the legs or you can have them support their occiput with their hands and roll down that way. This would facilitate a stretch through the rhomboids and trapezius. In saw, the best bet is to keep the back hand behind the head until they learn to move their spine without a gripping in the shoulder girdle. For swan, keep it small. Have them start with their forehead on their hands, and gently coming up into a small swan while keeping the shoulders relaxed. Watch for shoulder gripping the side kicks. Use a pillow or blanket, and cue the heaviness of the head on it while they move. No traditional push ups. Start with four point kneeling with the forearms on a sitting box. Get them to learn to activate their shoulder girdle there before moving to a fully extended arm, then plank.***

22. Name some exercises that someone with a lumbar spine injury can do safely while challenging their lumbo/pelvic stability.

**Answer**

***Diaphragmatic breath work, fingertip abdominal, marching, leg slides, small bridging, mini swan, four point kneeling, opposite arm and leg lift, and clam and the side leg series.***

***Breath is key. Especially for those with pain. Getting the diaphragm to move and slide in the body is a must to activate the core musculature to stabilize the spine. While performing the***

*supine work, you would want the client to be propped up with as much support as needed to help achieve a neutral spine placement. Working on differentiation between the pelvis and legs is essential. That is why marching and leg slides are key. While doing the pelvic bridge, be sure to hinge the spine up and down and have the focus be on maintaining length instead of height of the bridge. Four point kneeling teaches spinal stability in a new place in gravity, while adding on opposite arm and leg lift challenges the neutral spine here. And the clam and side kicks further the idea of differentiation as well as builds strength and stability in the side body, and trains the multifidus to fire.*

23. Say you have a client that is having trouble with a classical roll up due to a lack of abdominal strength and tight hip flexors, what are some ways to modify this exercise to build the skills to complete it successfully?

**Answers-**

*Keep the knees bent with the feet flat on the floor. Use the hands to hold onto the back of the thighs while only rolling back half way.*

*Place a small squishy ball right at the sacrum to give support to the body leveraging down towards the mat. Knees can be bent or extended here. This can be just enough support and tactile feed back for clients to feel the blooming of the kidney space while the energy of the legs can reach and ground.*

*Do a classical roll up with your feet right up against a wall. This can give the body the grounding it needs to use the abdominals and reach out of the hip flexors.*

24. What mat exercises are primarily abdominal strengthening in nature?

**Answers**

*100, roll up, single leg stretch, double leg stretch, single straight leg stretch, double straight leg stretch, criss cross, teaser.*

25. What skills are needed to perform single leg kick well?

*The breath is needed to help to guide the body and support it through the challenging parts of the exercise. The upper core needs to be strong to support the spine and ground in the mat. The front of the pelvis needs to be open so that the abdominals can activate and support the front of the spine and pelvis to keep it from moving. Strong hamstrings and glutes need to leverage the long line of the legs and the multifidus needs to turn on so it can help to stabilize any rotation that may come from the moving parts. It is also essential that the hip flexors and quadriceps are open and agile so that they don't pull the top of the ASIS down to the mat while the legs are moving.*

26. What are some exercises that their primary focus is spinal rotation?

***Answer***

***Saw, Spine Twist, Tic Toc, Corkscrew, Can Can, Side bend with Twist***