**Mid-Term Assignment (Spring 2020) (DPT 2nd Semester- sec B)**

**Course Title: Human Anatomy II Instructor: Dr. Maria Feroze**

**Time Allowed: 48 hours Max marks: 30**

**Note:**

* **This assignment has two sections (section 1: MCQs and section 2: Q/Ans). Solve both.**

 ***SECTION 1: Multiple Choice Questions* Max Marks: 15**

1. **Fibular shaft has**
2. **Four borders**
3. **Two borders two surfaces**
4. **Four borders four surfaces**
5. **Four surfaces**
6. **Two borders four surfaces**

**Which of the following is true?**

1. 1 and 4
2. 2, 3 and 4
3. 1, 3 and 4
4. 1,3 ,4 and 5
5. **Neck of the femur connects the head of the femur with the shaft. It is cylindrical, projecting in a superior and medial direction. It is set at an angle of \_\_\_\_\_\_\_\_\_\_\_\_degrees to the shaft.**
6. 156
7. 170
8. 135
9. 101
10. **The proximal area of the femur forms the hip joint with the acetabulum of the pelvis. It consists of a head and neck, and two bony processes the greater and lesser trochanters. There are also two bony ridges connecting the two trochanters; the intertrochanteric line anteriorly and the trochanteric crest posteriorly. Out of all these proximal bony landmarks which one is the most lateral palpable bony landmark?**
11. Greater trochanter
12. Lesser trochanter
13. The intertrochanteric line
14. Trochanteric crest.
15. **Patella is the bone of \_\_\_\_\_\_\_\_**
16. Leg
17. Foot
18. Only distal end of leg
19. Both a and c
20. **Metatarsal bones form the \_\_\_\_\_\_**
21. Hind foot
22. Mid foot
23. Fore foot
24. Both b and c
25. **Which of the following metatarsals usually has its growth plates situated proximally**
26. First metatarsal
27. First and second metatarsals
28. Second and third metatarsals
29. Third metatarsal
30. **The shaft of the femur descends in slight\_\_\_\_\_\_\_\_\_\_\_\_ for stability.**
31. Lateral direction
32. Medial direction
33. Posterior direction
34. Diagonal direction
35. **Which structure/s connects the apex of patella to the tibial tuberosity?**
36. Patellar Ligament
37. Patellar Tendon
38. Distal portion of the common tendon of the quadriceps femoris
39. Both A and B
40. All of the above
41. **Below , the tibia articulates with \_\_\_\_\_\_\_**
42. Distal end of fibula only
43. Distal end of fibula and talus bone
44. Distal end of fibula, talus bone and a small portion of calcaneus
45. All are true
46. **Which of the following is the medial bone of lower leg?**
47. Tibia
48. Fibula
49. Medial cuboid
50. Both a and c
51. **Which of the following ligaments is fully covered by synovial membrane?**
52. Iliofemoral ligament
53. Pubofemoral ligament
54. Ischiofemoral ligament
55. Transverse Acetabular ligament
56. Ligament of the head of femur
57. **The calcaneus is often fractured as a result of \_\_\_\_\_**
58. Distraction
59. Axial loading
60. Twisting
61. Walking
62. Sitting
63. **The depth of the acetabulum is raised by the\_\_\_\_\_\_**
64. Acetabular fat pad
65. Capsule of hip joint
66. Acetabular labrum
67. Ischial Bursa
68. Both b and c
69. **The most powerful ligament of hip joint is?**
70. Iliofemoral ligament
71. Pubofemoral ligament.
72. Ischiofemoral ligament.
73. Transverse acetabular ligament
74. All are powerful as they are ligaments of hip joint
75. **Sartorius muscle helps in the movement of \_\_\_\_\_\_\_**
76. Flexion
77. Flexion and abduction
78. Flexion, abduction and lateral rotation
79. All are true

**SECTION: A**

**MCQ’s**

1. **(A) Four borders and 4 surfaces**
2. **(C )** 135
3. **(A)** Greater trochanter
4. **(A)** Leg
5. **( C )** Forefoot
6. **(A)** 1st Metatarsal
7. **(B)** Medial direction
8. **(A)** Patellar Ligament
9. **(B)**Distal End Of Fibula and talus bone
10. **(A)** Tibia
11. **(E)** The ligament of head of femur
12. **(B)** Axial loading
13. **(C)** Acetabular labrum
14. **(A)** Ilifemoral ligament
15. **(D)** All are true

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* **This assignment has two sections (section 1: MCQs and section 2: Q/Ans). Solve both.**
* **You can use Google as a source of help but refrain from copy pasting the data directly from these sources.**
* **More than 25% plagiarism (similarity) in your answer will not be acceptable.**
* **Attempt all questions from this section, all questions carry equal marks.**

 ***SECTION NO 2: Q/Ans* Max Marks: 15**

**Q:1** Describe ankle mortise in your own words.

**Q:2** A patient comes to your clinic with gait imbalance. You ask him to stand upright from a sitting position and then rotate his left leg towards his left side. Which of the hip joint muscles of the left side become active during this whole movement?

**Q:3** Write down a note on:

1. Articulations of calcaneus
2. Difference in the size and shape of femoral condyles
3. Weight bearing status of fibula

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**SEMISTER:2nd**

**SECTION:B**

**PAPAR:ANATOMY**

**Q.1 Describe ankle mortise in your own words?**

Ans. ANKLE MORTISE:

 “Ankle mortise is define as the ankle so allowing the articular surface of the talus to fit in”

It is formed by:

1. **INFERIOR SURFACE OF TIBIA.**
2. **The malleoli ( of both side ).**

It is called mortise as the shape of the socket is similar to a joint used by craftsman to strengthen the connections in furniture and buildings, called mortise and tenon joint

**FUNCTION:**

1. It allows along with the upper surface of the talus dorsiflexion or plantarflexion at ankle Joint.
2. It dorsiflex positive of the foot I restricts the eversion and inversion of the foot

 ( sideways mobility is almost impossible )

**Q.2** A patient comes to your clinic with gait imbalance. You ask him to stand upright from a sitting position and then rotate his left leg towards his left side. Which of the hip joint muscles of the left side become active during this whole movement?

Ans. **1st MOVEMENT:**

 Extension of the thigh, the reverse of the above movement is performed by gluteus minimus at the externes of the movement and by the hamstring in the intermediate stage.

**2nd MOVEMENT:**

 Piriformis obturator internus and the gemelli quadratus femoris and obturator externus are lateral rotators assisted by gluteus minimus and sartorius

Q.3: **Write down a note on:**

1. Articulations of calcaneus
2. Difference in the size and shape of femoral condyles
3. Weight bearing status of fibula

Ans **: ARTICULATION OF CALCANEUS:**

 Calcaneus from joints at total on its two surface i.e superior and anterior

1. Superiority it dsticulates with talus forming “ Talocalcaneal joints”
2. Anteriorty it form two types of joints
3. One along with cuboidal bone called “Calcaneocuboidal Joint
4. The other along with anterior surface of talus to with naricular joint from “Talocalcaneonavicular Joint”

**WEIGHT BEARING STATUS OF FIBULA:**

 Fibula plays a minor role in bearing the weight of the body as we walk. It almost bears one six 1/6th of the body weight.

One might walk with a fibula fracture but isn’t the case so, because of its in the stability of the ankle joints, which will hamper one to do so..

**DIFFERENCE IN THE SIZE AND SHAPE OF FEMORAL CONDYLES:**

**Medial condyles:**

1. Most prominent point is called medial epicondyle
2. Provides attachment to the upper end of medial collateral ligament
3. A projection posterosuperior to the medial epicondyle is called adductor tubercle
4. Provide attachments insertion to the ischial head of adductor magnus

**Lateral condyle:**

1. Stronger than medial condyle but less prominent
2. Lateral surface represents a prominence call lateral epicondyle that provide attachment fibular collateral ligament
3. Also provide attachment to.

 . Lateral head of gastrocnemius

 . Popliteus