Rajiv Gandhi University of Health Sciences, Karnataka

IV Semester Bachelor of Occupational Therapy Degree Examination – 22-Nov-2023

Time: Three Hours   **Max. Marks: 100**

BIOMECHANINCS (LE) and ERGOTHERAPEUTICS- (OS/RS)
Q.P. CODE: 3424

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two)   **2 x 10 = 20 Marks**

1. Explain the biomechanics of hip joint.
2. Explain the structure and function of lumbar spine.
3. Explain the stability factors of knee joint. Add a note on screw-home mechanism.

SHORT ESSAYS (Answer any Ten)   **10 x 5 = 50 Marks**

4. Explain in detail various phases of gait.
5. Explain the concept of functional ambulation with example.
6. What is central wedge angle? What is its clinical significance?
7. Discuss the structure of a typical cervical vertebra.
8. Explain the role of ACL in knee stability.
9. Explain the effects of age and gender on gait.
10. What are the mobility factors of the ankle joint?
11. Discuss the common gait deviations.
12. Explain in brief, the biomechanical difference between unilateral and bilateral stance.
13. Explain the structure and function of facet joints.
14. Explain the role of piriformis at the hip joint.
15. What is plantar fasciitis? Explain the role of plantar aponeurosis.

SHORT ANSWERS (Answer any Ten)   **10 x 3 = 30 Marks**

16. What is metatarsal break?
17. Name four patellar inclination deformities.
18. Name the ligaments of ankle joint and subtalar joint.
19. Name and draw the Trabecular system of the hip joint.
20. What is foot drop gait?
21. Enumerate the temporal variables of gait.
22. Write a note on stand pivot and sliding board transfer techniques.
23. Define Q angle.
24. Write a note on sacroiliac joint.
25. What is windlass mechanism?
26. Enumerate the deformities of foot.
27. Define supination and pronation twist.

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