Rajiv Gandhi University of Health Sciences, Karnataka

III Semester Bachelor of Occupational Therapy Degree Examination – 07-Dec-2023

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

BIOMECHANICS (GENERAL & UE) and ERGOTHERAPEUTICS (OS/RS)
Q.P. CODE: 3420

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. Discuss static and dynamic stabilization of glenohumeral joint

2. Define vicarious movements. Discuss types with examples

3. Discuss elbow joint with respect to articulation and effect of injuries

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

4. Discuss acromioclavicular joint with respect to its biomechanical aspects
5. Write a note on concurrent force system and how its resultant is calculated
6. Discuss biomechanical aspects of radioulnar joint with respect to function
7. Discuss third class lever system with example
8. Discuss extensor mechanism of fingers
9. Discuss Newton's law of reaction
10. Discuss the role of muscle synergies in postural control
11. Discuss ligaments around wrist joint
12. Discuss various factors that affect posture
13. Discuss muscles helping in depression of shoulder complex
14. Discuss trade-offs of mechanical advantage
15. Discuss biomechanical aspects of metacarpophalangeal joints of the fingers

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

16. Discuss the concept of torque
17. Discuss rotator motion
18. Discuss elevation and depression movements of clavicle
19. Briefly discuss joint distraction forces
20. Discuss lumbrical muscles
21. Discuss stability of scapulothoracic joint
22. Discuss centre of mass of human body
23. Discuss palmar arches
24. Discuss location of displacement in space with reference to human body
25. Discuss structural aspects of carpometacarpal joint of the thumb
26. Write a note on wrist instability
27. Discuss any three abnormal postures

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