

**KALOJI NARAYANA RAO UNIVERSITY OF HEALTH SCIENCES
WARANGAL, TELANGANA STATE – 506 002**

BPT SECOND YEAR DEGREE EXAMINATIONS: JANUARY, 2026

BIOMECHANICS AND APPLIED ANATOMY

Time: 3 Hours

Max Marks: 80

Note: Answer all questions.

Draw diagrams wherever necessary.

Write essay on the following:

2 X 10 = 20

1. A. Explain the Kinetics and Kinematics of Knee Joint.

OR

- B. Discuss the mechanical advantages in Lever System.

2. A. Explain a typical Joint with Mechanical Properties and Features.

OR

- B. Describe the Structure and Movement of Lumbar Spine.

Write short note on the following:

8 X 5 = 40

3. Arches of Foot.
4. Prime Movers v/s Synergists.
5. Kinetics of Elbow Joint.
6. Lumbo-Pelvic Rhythm.
7. Determinants of Gait.
8. Inter- Vertebral Disc.
9. Tonic and Phasic Muscles.
10. Synovial Joint.

Write briefly on the following:

10 X 2 = 20

11. Spurt Muscle.
12. Rotator Cuff Muscles.
13. Angle of Femoral Torsion.
14. Pes planus.
15. Plantar Fascia Functions.
16. First order Lever.
17. Center of Gravity.
18. Tip to Tip Prehension.
19. Active Insufficiency.
20. Hinge Joints.
