Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination - September 2014

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

BIO-MECHANICS (Revised Scheme – 4)

Q.P. CODE: 2707

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. Describe in detail about static and dynamic stability of shoulder joint.
2. Enumerate the classification of joints and explain in detail with examples.
3. Describe in detail about mechanism of muscle contraction, and add a note on different types of muscle contraction.

SHORT ESSAYS (Answer any Twelve) **12 x 5 = 60 Marks**

4. Screw home mechanism of knee joint
5. Mention in brief about concurrent force systems.
6. Define gait and explain about phases of gait cycle.
7. Musculoskeletal changes in pregnancy
8. Explain in detail about functional position of wrist and hand.
9. Define lever and explain in detail about II order lever with example in human body.
10. Length tension relationship of a muscle
11. Structure and function of Temperomandibular joint
12. Mention in detail about muscles responsible for normal ventilation.
13. Enumerate the deviations occurring at Ankle joint.
14. Lumbo pelvic rhythm
15. Explain the concept of stability in Hip joint.
16. Outline the general properties of connective tissue.
17. Explain in brief about kinetics and kinematics with examples.

SHORT ANSWERS **10 x 2 = 20 Marks**

18. Define Moment arm of force.
19. Spurt and shunt muscle
20. What is Gait cycle?
21. Define axis and plane.
22. Explain good and bad posture.
23. What is concentric and eccentric contraction?
24. Stress strain curve
25. Name the ligaments of Hip joint.
26. Anteversion and Retroversion
27. Define COG and LOG.

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