Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T Degree Examination – Aug 2013

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

ANATOMY (RS-3 & RS-4)

Q.P. CODE: 2701

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary. Answer all questions

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

1. Explain the medial longitudinal arch of foot.

2. Explain the shoulder joint.

3. Explain the basal ganglia.

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

4. Femoral sheath
5. Ligaments of knee joint
6. Greater omentum
7. Diaphragm
8. Pericardium
9. External features of liver
10. Supports of the uterus
11. Histology of skeletal muscle
12. Upper end of humerus
13. Mastoid process
14. Trapezius muscle
15. External oblique muscle of abdomen
16. External jugular vein
17. Middle cerebral artery

SHORT ANSWERS   **10 x 2 = 20 Marks**
18. Histological diagram of large sized artery.
19. Name the arteries supplying suprarenal gland.
20. Name the deep flexors of forearm.
21. Name the parts of brain stem.
22. Name the bones of middle ear.
23. Name the intrinsic muscle groups of the tongue.
24. Name the nerve supply of extra ocular muscles.
25. Name the contents of cubital fossa.
26. *Parts of Parietal pleura*
27. Name the branches of the tibial nerve in popliteal fossa.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – Aug 2013

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

HUMAN PHYSIOLOGY (RS-3 & RS-4)

Q.P. CODE: 2702

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary. Answer all questions

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

1. Name four ascending tracts of the spinal cord. Trace the pathway for fine touch

2. Describe in detail the properties of cardiac muscle

3. With a labelled diagram explain the neuro – muscular transmission

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

4. Describe triple response
5. Enumerate the stages of erythropoiesis and describe the factors affecting them
6. Discuss the functions of bile salts
7. Describe the respiratory changes during muscular exercise
8. Discuss briefly the chemical regulation of respiration
9. Explain the refractive errors of the eye
10. What is a synapse? Draw and label the components of the synapse
11. Discuss the physiological actions of aldosterone
12. Explain the mechanism of spermatogenesis
13. With a neat diagram explain micturition reflex
14. Enumerate the functions of skin
15. Describe the events of the different phases of menstrual cycle with their hormonal basis
16. Describe the events in second phase of deglutition
17. Explain Flexion withdrawal reflex with a diagram

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

18. Name two mechanisms by which the body tolerates cold environment
19. State starling's law of muscle contraction
20. Enumerate the functions of placental hormones
21. What is facilitatory water reabsorption
22. Define isotonic and isometric contraction in skeletal muscle
23. Draw a cystometrogram
24. Note the action of ADH on kidney
25. List the GI hormones
26. Structure of a taste bud
27. Define jaundice

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – Aug 2013

Time: Three Hours   Max. Marks: 80 Marks

BIO-CHEMISTRY (RS-3 & RS-4)

Q.P. CODE: 2703

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary. Answer all questions

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

1. Define Glycolysis. Enumerate the steps of glycolysis and add a note on its energetics and regulation.
2. Define β – Oxidation. Describe the steps of β – Oxidation. Give the energetics for the oxidation of palmitic acid.
3. Write on sources, RDA, functions and deficiency manifestations of Vitamin A.

SHORT ESSAYS (Answer any Eight)   8 x 5 = 40 Marks

4. Functions of Lipoproteins

5. Define isoenzymes. Discuss on any two clinically important iosenzymes.

6. Describe the regulation of blood calcium.

7. Define and explain Creatinine test and add a note on its importance.

8. Describe Micelle formation.

9. Describe the structure of collagen.

10. Role of respiration in acid base balance

11. Glycogenesis and its regulation

12. Watson & Crick model of DNA.

13. Allosteric regulation of enzyme

SHORT ANSWERS   10 x 2 = 20 Marks

14. Essential fatty acids

15. Glutathione

16. Functions of iron

17. Give the normal values of a) Serum sodium b) Serum Potassium

18. Albinism

19. Lactose

20. What is nitrogen balance? Give one example each for positive and negative nitrogen balance.

21. Name any four special compounds derived from Glycine.

22. Give the normal values of a) Serum AST b) Serum Phosphorus

23. Mention two biotin dependent carboxylation reactions.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – Aug 2013

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 the kinetics and kinematics of motion with relation to the shoulder joint.

2.   Enumerate the various types of joints. Explain in detail each type giving examples.

3.   Analyze the various types of grips and pinches. Describe the movement occurring at the joints.

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

4.   Explain Newton's 1st Law of motion with an example of from human body.
5.   Describe the carrying angle and explain its importance for function of elbow and forearm.
6.   Explain the phases of swing phase of a gait cycle.
7.   Describe the movement of stair climbing.
8.   Explain the joint movement that occurs during breathing.
9.   *Analysis of movement from sitting to standing*
10. Explain the properties of bone tissue indicate the features that help maintain stability.
11. Describe the features of tonic and phasic muscles.
12. Define equilibrium; give the types with an example.
13. Describe the screw-home mechanism at the knee joint.
14. Explain the movements of facet joint of the vertebral column.
15. Explain passive insufficiency with examples.
16. Outline the various axis and planes of movement and give the movements that occur.
17. Explain the lever of 1st order and give an example of human movement.

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

18. Define arthrokinematics.
19. *Give 2 uses of plantar arches.*
20. Define step length and stride length.
21. *Define Mechanical Advantage with an example*
22. Explain good posture.
23. Where does line gravity pass through in the spine?
24. Define Hooke's law.
25. Give 2 functions of a connective tissue.
26. Explain Q angle.
27. What is a closed packed position?

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year BPT Degree Examination – Aug 2013

Time: Three Hours   **Max. Marks: 80 Marks**

BIO-MECHANICS
(RS-3)
Q.P. CODE: 2704

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 kinetics and Kinematics of gait

2. Discuss the biomechanics of cervical spine

3. Discuss the biomechanics of shoulder complex and explain the dynamic stability in detail

SHORT ESSAYS (Answer any Eight)   **8 x 5 = 40 Marks**

4. Discuss the plantar arches

5. Write a short on tonic and phasic muscles

6. Analyse the movement of pulling

7. Explain the movements of scapulothoracic joint

8. What is base of support? Explain it in relation to mobility and stability

9. Explain the structure and function of intervertebral disc

10. Explain lumbopelvic rhythm

11. Explain young's modulus in relation to stress and strain

12. Types of muscle contraction. Give example

13. Explain Length – tension relationship

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

14. Carrying angle

15. Pivot joint with example

16. Define Dynamic friction

17. Define Double support time

18. Prime movers

19. Scoliosis

20. Hallux valgus

21. Define energy

22. Explain tibial torsion

23. Define Inertia

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – Aug 2013

Time: 3 Hours   **Max. Marks: 40 Marks**

General Psychology

Q.P. Code : 2705

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

(Note : Both QP Codes 2705 and 2706 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One)   **1 x 10 = 10 Marks**

1. What is the psychology? Explain the scope of psychology?
2. What is motivation? Describe the classification of motives

SHORT ESSAYS (Answer any Four)   **4 x 5 = 20 Marks**
3. Explain the role of psychology in the field of physiotherapy
4. Describe the determinants of attention.
5. What is heredity? Explain the role of heredity in human development
6. Explain the assessment of intelligence
7. Write a note on classical conditioning theory of learning.

SHORT ANSWERS   **5 x 2 = 10Marks**
8. Stress
9. What is attitude?
10. Rationalization
11. Conflict
12. Illusion

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – Aug 2013

Time: 3 Hours   **Max. Marks: 40 Marks**

<u>Sociology</u>

Q.P. Code : 2706

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

<u>(Note : Both QP Codes 2705 and 2706 are to be answered within total duration of 3 hours)</u>

LONG ESSAYS (Answer any One)   **1 x 10 = 10 Marks**
1. *What are the causes of poverty and write the remedial measures*
2. Explain the merits and demerits of family system in India

SHORT ESSAYS (Answer any Four)   **4 x 5 = 20 Marks**
3. Health hazards of tribal community
4. Characteristics of secondary group
5. Education and social change
6. Characteristics of law
7. Write a note on unemployment

SHORT ANSWERS   **5 x 2 = 10Marks**
8. Re-socialization
9. Monogamy
10. Joint family
11. Alocentric family
12. Population explosion

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