Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T Degree Examination – 16-May-2023

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

HUMAN ANATOMY (RS5)

Q.P. CODE: 2731

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

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Describe the Elbow Joint in detail.
2. Describe in detail femoral triangle.
   OR
   Describe the Arches of Foot in detail.

SHORT ESSAYS (Question No 3 & 12 choice) **10 x 5 = 50 Marks**

3. Facial vein.
   OR
   Cubital fossa.
4. Cerebellum.
5. Urinary bladder.
6. Pancreas.
7. Deltoid muscle.
8. Ligaments of knee joint.
9. Parotid gland.
10. Testis.
11. Nephron.
12. Upper end of femur.
    OR
    Triceps surae

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Name four supports of uterus.
14. Parts and function of gall bladder.
15. Parts of uterine tube.
16. Extra ocular muscles.
17. Hilum of kidney.
18. Name any four tarsal bones.
19. Hyaline cartilage.
20. Diagram of Neuron.
21. Name the branches of arch of aorta.
22. Rectus sheath.

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I Year B.P.T. Degree Examination – 18-May-2023

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

HUMAN PHYSIOLOGY (RS - 5)

Q.P. CODE: 2732

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

LONG ESSAYS (Second Question choice) **2 x 10 = 20 Marks**

1. Define cardiac cycle. Discuss the ventricular phases with the help of a graph.
2. Explain the role of a triad in skeletal muscle contraction. Add a note on Myasthenia gravis.

   Or

   Enumerate the descending pathway. Trace pyramidal tracts, write its functions and add a note on Hemiplegia.

SHORT ESSAYS (Question No.3 & 12 choice) **10 x 5 = 50 Marks**

3. Define stroke volume. Explain the factors affecting venous rectum.

   Or

   Define Action Potential. Discuss the ionic basis of Action Potential.
4. **Describe the functions of bile.**
5. Describe the stages of Erythropoiesis. With a flow chart outline the factors regulating it.
6. Describe the role of collecting duct loop of henle and **vasa recta** in counter current mechanism.
7. Explain the mechanism of spermatogenesis. List three factors influencing it.
8. Define hypoxia. Tabulate the features of different types of hypoxias giving examples for each.
9. Describe the action of insulin on target cells. Add a note on Diabetes Mellitus.
10. Trace the visual pathway. Explain the effects of lesion at different levels of the pathway.
11. Briefly outline the structure of Juxta glomerular apparatus and its functions.
12. Discuss any five properties of synapse.

    Or

    With the help of flowchart outline the chemical regulation of respiration.

SHORT ANSWERS **10 x 3 = 30 Marks**

13. What is a motor unit?
14. Define Haldane effect.
15. Define Homeostasis
16. Name the GI hormones
17. What is thrombocytopenic purpura?
18. Trace the pathway for fine touch.
19. Define Anemia. List the types of Anemia.
20. Write the normal RBC count and WBC count.
21. Define Cyanosis.
22. What is End Diastolic Volume'?

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I Year B.P.T. Degree Examination – 20-May-2023

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

BIOCHEMISTRY (RS-5)
Q.P. CODE: 2733

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

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

1. Enumerate the sources, RDA, functions and deficiency disorders of Vitamin A
2. Describe the steps of Glycolysis. Add a note on its regulation.

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

3. Write the functions of carbohydrates.
4. Explain urea cycle.
5. Write the regulation of calcium in our body.
6. Explain the fluid mosaic model of plasma membrane.
7. Metabolic Acidosis.
8. Define BMR and write the factors affecting it.
9. Write the classification of lipids.
10. Explain the Watson and Crick model of DNA.
11. Write the causes and features of artherosc1erosis.
12. Write the biochemical functions of vitamin C.

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Functions of collagen.
14. Define anion gap.
15. Name the proteins in muscle contraction.
16. Write the normal levels of sodium and chloride ions in our body.
17. Phenylketonuria
18. Pellagra.
19. Define transamination.
20. Features of Rickets.
21. Define dietary fibres with example.
22. Function of Iron.

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I Year B.P.T. Degree Examination – 22-May-2023

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

BIO-MECHANICS (RS - 5)
Q.P. CODE: 2734

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

LONG ESSAYS (Second Question choice) **2 x 10 = 20 Marks**

1. Define Lever? Explain different orders of levers with relation to human body.
2. Define Posture? Enumerate different types of posture and explain the frontal plane analysis of posture.

   Or

   Define Ventilation? Explain in detail kinetics and kinematics of Thoracic rib cage

SHORT ESSAYS (Question No.3 & 12 choice) **10 x 5 = 50 Marks**

3. Explain Kinetics of Kinematics of Elbow Joint.

   Or

   Explain Newtons laws of Motion.
4. Explain the structure of cervical spine.
5. Describe Screw home mechanism of knee Joint.
6. Define Equilibrium? Explain different types of Equilibrium.
7. Explain determinants of Gait.
8. Describe Scapulo humeral rhythm.
9. Describe Palmar arches.
10. Define Pulley? Explain the different types of pulleys in human body.
11. Define Goniometry? And mention the procedure for Inversion and eversion.
12. Explain synovial joints in detail with neat diagram.

    Or

    Explain Active Insufficiency and Passive Insufficiency.

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Write in short Phases of sit to stand activity.
14. What is Q angle and its significance.
15. What are Spurt and Shunt Muscles?
16. Mention the phases of Gait cycle.
17. What is Pulled Elbow?
18. Mention different types of Muscle contraction.
19. Name the ligaments of Hip Joint.
20. What is Cubitus Varus and Valgus?
21. Name the factors affecting Muscle tension.
22. Write in detail Trendelenberg gait.

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I Year B.P.T. Degree Examination - 24-May-2023

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

PSYCHOLOGY (RS5)
Q.P. Code: 2735

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note: Both QP Codes 2735 and 2736 are to be answered within total duration of 3 hours)

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

1. Define Frustration. Explain the sources of Frustration
2. Define Learning. Explain classical conditioning by Pavlov

SHORT ESSAYS (Answer any Three) **3 x 5 = 15 Marks**

3. What is meant by individual differences? Describe the causes.
4. Describe the branches of Psychology. Is Psychology important in the field of Physiotherapy?
5. Define Attention. Explain determinants of Attention
6. Explain the Personality Inventories

SHORT ANSWERS **5 x 3 = 15 Marks**

7. Leadership Styles
8. Stress and its management
9. Uses of Psychology
10. Elements of personality
11. Interviews

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I Year B.P.T. Degree Examination – 24-May-2023

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

SOCIOLOGY (RS5)
Q.P. CODE: 2736

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.
(Note: Both QP Codes 2735 and 2736 are to be answered within total duration of 3 hours)

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

1. Explain the factors of social change and its relation with stress and deviance.
2. Define population explosion. Explain its causes, effects and measures to control population explosion.

SHORT ESSAYS (Answer any Three) **3 x 5 = 15 Marks**

3. Case study method.
4. Juvenile delinquency.
5. Major urban problems.
6. Characteristics of culture.

SHORT ANSWERS **5 x 3 = 15 Marks**

7. Family and nutrition.
8. Types of beggars.
9. Sociology and anthropology.
10. Re-socialization.
11. Oedipal complex.

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I Year B.P.T Degree Examination – 22-Nov-2023

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

HUMAN ANATOMY (RS5)
Q.P. CODE: 2731

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

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Describe the Hip joint in detail.
2. Describe the thoraco-abdominal diaphragm under the following headings : a) origin b) insertion c) nerve supply d) openings e) applied anatomy

   OR

   Describe the origin, course, branches and applied aspects of the facial nerve in detail.

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SHORT ESSAYS (Question No 3 & 12 choice) **10 x 5 = 50 Marks**

3. Trapezius muscle.
   OR
   Scapula bone.
4. **Microscopic structure of Transverse Section of compact bone.**
5. Boundaries and contents of popliteal fossa.
6. Fertilization.
7. Sciatic nerve: root, course, branches and applied aspects.
8. Circle of Willis.
9. Gluteus maximus muscle.
10. Wrist joint: articulation and ligaments.
11. Uterus: parts, position and supports.
12. Femur bone: parts, explain upper end in detail.
    OR
    Right atrium of heart.

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Name the rotator cuff muscles.
14. Name the cranial nerves.
15. Name the tarsal bones.
16. Sesamoid bone.
17. Name the ear ossicles.
18. Enlist the dural folds.
19. Name the cartilages of larynx.
20. Draw neat labelled diagram of spermatozoa.
21. Name the muscles of mastication.
22. Anatomical position.

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I Year B.P.T. Degree Examination – 27-Nov-2023

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

BIOCHEMISTRY (RS-5)
Q.P. CODE: 2733

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

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

1. Explain the different types of enzyme inhibition with suitable examples.
2. 2. Describe in detail the chemistry, sources, daily requirement, biochemical functions and deficiency manifestations of Vitamin D.

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

3. Beta oxidation.
4. Phospholipids.
5. Structural classification of amino acids.
6. Explain the wastson and crick model of DNA.
7. Glycogen storage disorders.
8. Explain the mechanism of absorption of iron. Add a note on deficiency manifestations.
9. Hormonal regulations of blood glucose.
10. Mucopolysaccharides.
11. Biochemical functions of Vitamin A
12. Classify enzymes with suitable examples.

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Essential fatty acids.
14. Scurvy.
15. Balanced diet.
16. Mitochondria.
17. Respiratory acidosis.
18. Normal level of urea and creatinine.
19. Calorific value.
20. Cori's cycle.
21. Collagen.
22. Ketone bodies.

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I Year B.P.T. Degree Examination – 29-Nov-2023

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

BIO-MECHANICS (RS - 5)
Q.P. CODE: 2734

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

LONG ESSAYS (Second Question choice) **2 x 10 = 20 Marks**

1. Describe in detail about static and dynamic stability of shoulder joint.
2. What is the difference between power grip and precision grip? Describe any two types of Grip.

   Or

   What are the events in stance phase of Gait cycle? Analyze and write the lower extremity joint motion during stance phase.

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SHORT ESSAYS (Question No.3 & 12 choice) **10 x 5 = 50 Marks**

3. Describe the structure of Intervertebral Disc.
   Or
   Lumbo pelvic Rhythm.
4. Screw home mechanism of knee joint.
5. Explain in brief about kinetics and kinematics with example.
6. Length tension relationship of a muscle.
7. Describe the structure and function of radioulnar joint.
8. Analyze activity of standing to sitting.
9. Structure and function of temperomandibular joint.
10. Define lever and explain in detail about II order lever with example in human body.
11. Describe the structure and movements of Acromioclavicular joint.
12. Analyze the forces on the hip during bilateral stance.
    Or
    Define active and passive insufficiency. Explain any one.

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Carrying angle.
14. Define COG and LOG.
15. What is loose-packed position of a joint?
16. Stress and strain curve.
17. What is Genu recurvatum?
18. What are the movements of first Carpometacarpel joints?
19. Mention the uses of Pulleys.
20. Name the muscle **contracting** during normal breathing.
21. Spurt and shunt muscle.
22. Functional significance of palmar arches.

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