Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T Degree Examination – 21.01.2021

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

ANATOMY (RS3 & RS4)
Q.P. CODE: 2701

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 hip joint in detail.
2. Name the cranial nerves in order. Explain facial nerve in detail.
   OR
   Describe the external features of heart. Explain right atrium in detail.

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

3. Mediastinum.
   OR
   Deltoid.
4. Histology of testis.
5. Fourth ventricle.
6. Axilla.
7. Hamstring muscles.
8. Facial artery.
9. Upper end of femur.
10. Spermatogenesis.
11. Diaphragm.
12. Tibialis anterior.
    OR
    Uterus.

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

13. Parts of uterine tube.
14. Name the attachments of Bicipital groove.
15. Moderator band.
16. Name the ligaments of shoulder joint.
17. Parts of corpus callosum.
18. Name the carpal bones.
19. Name the evertors of foot.
20. Histology of Elastic cartilage (only diagram).
21. Ligaments of TMJ.
22. Layers of pericardium.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T Degree Examination – 21.01.2021

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 shoulder joint under the following headings – types, bones forming joint, ligaments and movements.
2. Describe the boundaries, roof and floor, contents and applied anatomy of femoral triangle.
   OR
   Describe cerebrum in detail.

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

3. Biceps brachialis
   OR
   Liver
4. Rectus abdominus
5. Popliteal fossa
6. Fertilization
7. Anatomy of right lung
8. Thyroid gland
9. Cerebellum
10. Testis
11. Arches of foot
12. Arch of aorta and its branches
    OR
    Stomach

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

13. Layers of wall of heart
14. Nephron
15. Draw labeled diagram of neuron
16. Sesamoid bone
17. Name muscles that cause pronation and supination at forearm
18. Intervertebral disc
19. Histology of large artery
20. Types of cartilage
21. Ischeal tuberosity
22. Any four branches of external carotid artery

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – 25-Jan-2021

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

HUMAN PHYSIOLOGY (RS5)
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. Explain the changes taking place during the phases of Cardiac cycle.
2. Name the hormones of anterior pituitary and describe the actions and disorder of any one hormone.

   OR

   With the help of a graph explain length-tension relationship of skeletal muscle contraction.

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

3. Functions of pancreatic juice

   OR

   Briefly describe the stages of erythropoiesis. Enumerate the non-dietary factors.
4. Explain the mechanism of triple response.
5. Give a brief account of chemical regulation of respiration.
6. Describe the immunological tests of pregnancy.
7. Define jaundice. Write the features of the different types of jaundice.
8. Enumerate the posterior pituitary hormones. Discuss the physiological action of each.
9. List the four functions of the middle ear. Explain any one.
10. What is a synapse? List the different types of synapses and discuss any four properties.
11. Enumerate the functions of basal ganglia.
12. Draw a schematic diagram to show the intrinsic pathway of coagulation.

    OR

    What is color vision? How do you test it clinically? Classify color blindness.

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

13. Define menopause. Write any four features.
14. Differentiate between exocytosis and endocytosis.
15. Define dead space. Define the types of dead space.
16. What is a motor unit? Draw a neat labeled diagram.
17. State All or None law.
18. Define peripheral resistance. Enumerate its factor.
19. Enumerate the functions of angiotensin II.
20. What is MCV? Give its normal value.
21. Define the mechanisms of neurocrine, autocrine and endocrine.
22. Define resting membrane potential.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – 25-Jan-2021

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

HUMAN PHYSIOLOGY (RS3 & RS4)
Q.P. CODE: 2702

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 various stages of erythropoiesis and the various factors influencing it.
2. Describe the mechanism of transmission of nerve impulse across the neuromuscular junction.

   OR

   Trace the pathway for pain sensation. Add a note on Gate theory of pain and referred pain.

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

3. What are the contents and functions of the middle ear?

   OR

   Explain the immunological test for pregnancy.
4. Tabulate the differences between I and II heart sounds.
5. Describe the different phases of action potential and its ionic basis
6. Explain the extrinsic mechanism of blood clotting. Add a note on anticoagulants.
7. Explain the movements of small intestine.
8. Explain the renal function tests.
9. Describe the functions of saliva.
10. Describe Wallerian degeneration.
11. Describe the neural regulation of respiration.
12. Enumerate the action of insulin on carbohydrate metabolism. Add a note on Diabetes Mellitus.

    OR

    What is periodic-breathing? Explain the types of periodic – breathing.

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

13. Draw a labeled diagram of ECG and give the causes of each wave
14. Name the hormone responsible for milk ejection reflex
15. List three methods of contraception in the female
16. Define GFR. Give its normal value
17. List two differences between red and white muscles
18. List the ascending tracts and the sensations carried by them
19. List any three errors of refraction and their corrections
20. List two function of liver
21. List any four functions of skin.
22. List the various methods of artificial respiration

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – 28-Jan-2021

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

BIOCHEMISTRY (RS5)
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. Give an account of chemistry, sources, daily requirement, biochemical functions, deficiency manifestations of Vitamin A.
2. Describe in detail the types of diabetes mellitus. Add a note on glucose tolerance test.

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

3. Glycogenolysis.
4. Explain the structure and function of tRNA.
5. Transamination.
6. Biochemical mechanism of muscle contraction.
7. Dietary fibre.
8. Functions of Vitamin C.
9. Factors affecting enzyme activity.
10. Functions of proteins.
11. Metabolic acidosis.
12. Regulation of plasma calcium level.

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

13. Deficiency symptoms of niacin.
14. Name any two phospholipids with their functions.
15. Normal serum values of Blood urea and creatinine.
16. Essential fatty acids.
17. Mentions two enzymes of diagnostic importance in myocardial infarction.
18. Fluorosis.
19. Mitochondria.
20. Nucleotides of biological importance.
21. Name the coenzymes of niacin and riboflavin.
22. Define active transport.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – 28-Jan-2021

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

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

1. Describe the Liver function tests
2. Describe Urea cycle. Name two inborn errors associated with this cycle

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

3. Dietary fibres
4. Sources and absorption of calcium
5. Wald's visual cycle
6. Write a note on the structure of myosin
7. Factors affecting enzyme activity
8. Describe structure of DNA
9. Mucopolysaccharides
10. Explain the sliding filament theory of muscle contraction
11. Fluid mosaic model of cell membrane
12. Metabolic acidosis

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

13. Anion Gap
14. Balanced diet
15. Vitamin C
16. Gout
17. Functions of phospholipids
18. Name the hormones regulating blood glucose
19. Night blindness
20. Beri - Beri
21. Starch
22. Specialized products formed from Glycine

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination - 01-Feb-2021

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

BIO-MECHANICS (RS4)
Q.P. CODE: 2707

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 Levers. Classify levers with examples and diagrams.
2. Enumerate various grips of hand in detail with examples.
   OR
   Describe in detail about scapulohumeral rhythm and its clinical significance.

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

3. Screw home mechanism of knee joint.
   OR
   Mention in brief about various prehensions of hand.
4. Lumbopelvic rhythm.
5. Mechanics of ventilation.
6. Palmar arches.
7. Analysis of forces in Unilateral stance.
8. Define posture and mention in brief about abnormalities of posture.
9. Gait cycle in detail.
10. Pes planus and Pes cavus
11. Classify synovial joints in detail.
12. Mention in brief about different types of muscle contraction.
    OR
    Carrying angle and its significance.

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

13. Define postural sway.
14. Passive insufficiency with example.
15. Acetabular labrum importance.
16. Name the muscles of Inspiration and Expiration.
17. Squinting of patella.
18. Angle of inclination of femur and its significance.
19. Hysteresis.
20. Name the ligaments of knee joint and its functions.
21. Name the plantar arches and its attachments.
22. Name the rotator cuff muscles and its role in shoulder joint stability.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T Degree Examination – 01-Feb-2021

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

Marks

BIO-MECHANICS (RS5)

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. Name the structures which help in stability of lumbar vertebral column. Explain in detail the biomechanics of lumbar spine.
2. What structures comprises Extensor mechanism. Write in detail about the extensor mechanism of hand.

   OR

   Define Gait. Explain the determinants of gait in detail.

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

3. Write a note on the types of muscle fibers and its characteristic features.

   OR

   Describe the structure and function of intervertebral disc.
4. Explain briefly stability of radioulnar joint.
5. Explain open kinematic chain and closed kinematic chain with examples.
6. Define joint. Write a note on synovial joint.
7. Explain Gleno-humeral rhythm.
8. Explain the strategies to maintain postural balance.
9. Write a note on movements of temporomandibular joint.
10. Describe the function of diaphragm during ventilation.
11. Discuss in brief about supination and pronation twist.
12. Add a note on knee joint burse.

    OR

    Write a note on trabecular system of hip joint.

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

13. What is Q – angle?
14. What is metatarsal break?
15. Write any two gait deviations.
16. What is mechanical advantage?
17. What are the movements of sacrum?
18. What is young’s modulus?
19. What is Active insufficiency?
20. Name the types of muscle contraction
21. What is double support time?
22. Describe meniscus.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination - 03-Feb-2021

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 personality. Explain Sigmund Freud's concept of personality.
2. Define learning. Explain the factors that affect learning.

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

3. School of behaviourism
4. Difference between illusion and hallucination
5. Distribution of intelligence
6. Steps involved in creative thinking

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

7. Attention
8. Motivational cycle
9. Conflict
10. Define twins
11. Repression

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I Year B.P.T. Degree Examination – 03-Feb-2021

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. Define Social Group and distinguish between Primary and Secondary Group.
2. Explain any one social problem in relation to its cause, effect and solution.

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

3. Family and Nutrition.
4. Functions of Culture.
5. Social survey method.
6. Features of Rural community.

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

7. Causes for beggary
8. Immoral Traffic Act.
9. Social psychology.
10. Medical Social Work.
11. Psycho-somatic disorders.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – 03-Feb-2021

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. Define personality. Explain the personality assessment test with suitable example
2. Define Intelligence. Explain any three theories of intelligence

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

3. Explain the principles of perception
4. Role of psychology in physiotherapy
5. Analysis of Emotion
6. Nature vs Nurture controversy

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

7. Distinguish between Pure psychology and Applied psychology
8. Concept formation in thinking
9. Types of conflict
10. Whole and part learning
11. Reaction formation

I Year B.P.T. Degree Examination – 03-Feb-2021

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

SOCIOLOGY

Q.P. CODE: 2706

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. Define sociology. Explain the scope of sociology.
2. Define social group. Explain the importance of primary and secondary group in hospital and rehabilitation setting.

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

3. Explain agencies of socialization
4. Culture and its effect on health
5. Role of social factors in health and illness
6. Social change and health programme

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

7. Case study method
8. Define social psychology
9. Define Polyandry
10. MSW
11. Social security

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T Degree Examination – 02-Mar-2021

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

ANATOMY (RS3 & RS4)

Q.P. CODE: 2701

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 Brachial Plexus.
2. Describe in detail anatomy of Temporal mandibular joint.

   OR

   Describe the boundaries, contents, relations and applied anatomy of Popliteal fossa.

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

3. Structure of cell.

   OR

   Medulla Oblongata.
4. Right atrium.
5. Upper end of femur.
6. Vertebral column.
7. Wrist joint.
8. Blood supply of heart.
9. Intercostal muscles.
10. Classification of cartilage.
11. Structure of neuron.
12. Biceps brachii muscle.

    OR

    Rotatory cuff of shoulder.

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

13. Diagram of Liver.
14. Muscles of facial expression.
15. Nerve supply of tongue.
16. Oogenesis.
17. Median cubital vein.
18. Name the layers of skin.
19. Histology of cardiac muscle.
20. Name the parts of large intestine.
21. Name the carpals.
22. Name the parts of a long bone.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – 04-Mar-2021

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

HUMAN PHYSIOLOGY (RS3 & RS4)

Q.P. CODE: 2702

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. Draw a diagram showing the nerve supply to the heart and explain short term regulation of blood pressure.
2. Explain the molecular basis of skeletal muscle contraction.

   OR

   Explain the physiological actions of thyroid hormone and add a note on its disorders.

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

3. Brief note on surfactant.

   OR

   Factors affecting Glomerular Filtration Rate.
4. Composition and functions of gastric juice.
5. Functions of platalets.
6. Trace the taste pathway.
7. Functions of blood.
8. Stages of spermatogenesis.
9. Dark adaptation.
10. Functions of plasma proteins.
11. Two contraceptive methods in females.
12. Movements of small intestine.

    OR

    Describe any two types of hypoxia.

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

13. Define Mean corpuscular volume. Give its normal value.
14. Hormones secreted by adrenal cortex.
15. Packed cell volume.
16. Define shock and enumerate the types of shock.
17. Draw the diagram of normal Electro Cardiogram (ECG) and label the parts.
18. Renal threshold for glucose.
19. In vivo anticoagulants.
20. Name various lung volumes and capacities.
21. Name the components of reflex arc.
22. List the functions of white blood cells.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – 08-Mar-2021

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.

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

1. Explain sources, daily requirement, functions and deficiency manifestations of vitamin D.
2. Define balanced diet. Mention the nutritional importance of carbohydrates, proteins and lipids.

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

3. Classify lipids with suitable example.
4. Explain the absorption, distribution and storage of calcium.
5. Define BMR. Explain the factors affecting it.
6. Define enzymes. Mention any two factors affecting enzyme activity.
7. Explain how lipids are absorbed in the Gastro intestinal tract.
8. Urea cycle
9. Mention important products formed by phenyl alanine and glycine.
10. Explain the structural organization of proteins with example.
11. Explain the regulation of blood glucose.
12. Explain the structure of plasma membrane with suitable diagram.

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

13. Write the levels calcium and urea in serum.
14. Enumerate any two causes of metabolic acidosis.
15. What is anion gap?
16. Enumerate any two functions of proteins.
17. Enumerate any two thyroid function tests.
18. Essential amino acids.
19. Enumerate any two biologically important compounds produced from cholesterol.
20. Invert sugar.
21. Name any two second messengers.
22. Functions of Lysosomes.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – 15-Mar-2021

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. Define personality. Explain Sigmund Freud's theory of personality.
2. Define learning. Explain the effective ways of learning.

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

3. Types of attention
4. Psychoanalytical school of psychology
5. Explain classical conditioning theory of learning
6. Types of leadership

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

7. Types of reasoning
8. Types of twins.
9. Frustration
10. Motivational cycle.
11. Ego-defense mechanisms

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I Year B.P.T. Degree Examination – 15-Mar-2021

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

SOCIOLOGY
Q.P. Code: 2706

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. Explain any one social problem in relation to its cause, effect and solutions.
2. Discuss the social factors affecting health and disease.

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

3. Factors of Social Change
4. Family and Nutrition
5. Effects of Alcoholism
6. Major Urban Problems

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

7. Relation between sociology and psychology
8. Problem of the under privileged
9. Monogamous Family
10. Anticipatory Socialization
11. Define 'Health'.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination - 10-Mar-2021

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

BIO-MECHANICS (RS4)

Q.P. CODE: 2707

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. Explain the articulation of shoulder joint and add note on static and dynamic stability of shoulder.
2. Explain the biomechanics of lumbar spine.
   OR
   What is posture? What is postural reflex? Explain the sagittal plane analysis of the posture.

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

3. Write a note on kinematic chains.
   OR
   What is the functional unit of a muscle? Explain various types of muscle fibers.
4. Movements of rib cage during breathing - Explain the role of inter costal muscles in breathing.
5. Explain the movements of temporomandibular joint.
6. Define levers. Explain the orders of levers and its use in physiotherapy.
7. Extensor mechanism of finger and its function
8. What is a joint? Explain the synovial joint and its classification with examples.
9. Describe the weight bearing of hip joint and add a note on muscle forces in unilateral stance.
10. Supination twist
11. Describe patella femoral articulation and PFJ reaction forces.
12. Describe the structure of elbow joint and explain the factors affecting the stability of the joint.
    OR
    Explain the motions of pelvis at hip joint.

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

13. Plantar aponeurosis and its functions.
14. Spurt and shunt muscle.
15. Running gait.
16. Function of anterior cruciate ligament.
17. Tipping of scapula.
18. Lateral prehension.
19. Coxa valga and its biomechanical effect in stability.
20. Flat foot : definition and types.
21. Young’s modulus.
22. What is the normal physiological angulation of the knee joint and its significance.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – 02-Mar-2021

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 shoulder joint under the following headings. Articular surface, ligaments, movements and muscles causing movements and applied anatomy.
2. Describe the external features and connections of cerebellum. Add a note on its functions.
   Or
   Describe the blood supply of heart and applied anatomy.

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

3. Orbicularis oculi (Origin, insertion, nerve supply and action)
   Or
   Supports of Uterus.
4. Common peroneal nerve.
5. Fertilization.
6. Vermiform appendix.
7. Corpus callosum.
8. Facial nerve.
9. Femoral triangle – boundaries and contents.
10. Rectus sheath.
11. Histology of T.S of Bone.
12. Lateral wall of nasal cavity.
    Or
    Cubital Fossa.

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

13. Name the branches of Adbominal aorta.
14. Name the Tarsal bones.
15. Histology of skeletal muscle.
16. Ischial tuberosity.
17. Name the skull bones.
18. Name the derivatives of Ectoderm.
19. Parotid duct.
20. Wrist drop.
21. Iliotibial tract.
22. Muscles of Mastication.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – 04-Mar-2021

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

HUMAN PHYSIOLOGY (RS5)
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 arterial blood pressure. Give the normal value. Explain the mechanism of long-term regulation of blood pressure.
2. Define and draw a labelled diagram of sarcomere. Explain excitation-contraction coupling in detail.

OR

With the help of a neat diagram, describe oxygen-haemoglobin dissociation curve. Explain any four factors that shift the curve to right.

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

3. Name the types of Deafness and write the tests to differentiate them.

OR

Define and classify anemia. Explain the causes and symptoms of Megaloblastic anemia.

4. Describe the events in neuromuscular transmission.
5. With the help of flow chart, explain defecation reflex.
6. Draw a labelled diagram of normal Electrocardiogram and explain the basis of each wave.
7. Draw and explain normal spirogram.
8. Write the circulation and functions of cerebrospinal fluid.
9. What are the different phases of gastric juice secretion? Explain any one phase.
10. What is a negative feedback mechanism? Explain with an example.
11. Differentiate T-lymphocytes from B-lymphocytes
12. Outline the functions of cerebellum

OR

Trace the pain pathway. Define referred pain.

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

13. List the plasma proteins with one function each.
14. What are anticoagulants? Write the mechanism of action of Heparin.
15. Write a note on Facilitated diffusion with example.
16. List the functions of Bile.
17. Define and state the cause of Tetany.
18. Draw and label Juxtaglomerular apparatus.
19. What is Haemophilia? How is it caused?
20. What is Presbyopia? How is it corrected?
21. What is Acromegaly? Write its symptoms.
22. What are the factors influencing GFR?

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – 08-Mar-2021

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. Describe the chemistry, RDA, sources, functions and deficiency symptoms of vitamin A.
2. Explain urea cycle. What is the significance of blood urea level?

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

3. Structure and functions of t RNA.
4. Biologically important peptides.
5. Respiratory and metabolic alkalosis.
6. Fatty liver.
7. Define BMR. Explain about the factors affecting it.
8. Explain creatinine test add note on its importance.
9. Watson and crick model of DNA.
10. Enzyme inhibition.
11. Dietary fibers.
12. Protein Energy Malnutrition.

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

13. Pellagra.
14. Normal levels of cholesterol and calcium.
15. Name special compounds derived from Glycine.
16. Myosin.
17. Phenyl Ketonuria.
18. Cyclic AMP.
19. Mitochondria.
20. Mucopolysaccharides.
21. Kwashiorkar.
22. Name the coenzymes of a) Thiamine b) Pyridoxine

I Year B.P.T. Degree Examination - 15-Mar-2021

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 psychology? Explain the scope of psychology.
2. Define learning? Explain, classical and operant conditioning theories of learning.

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

3. Factors influencing on attention
4. Explain James – Lange theory of emotion.
5. Steps in creative thinking
6. Development of attitude

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

7. Define Heredity
8. Illusion
9. Define mental age
10. Projection
11. Stress

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – 15-Mar-2021

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 causes of Population explosion in India and suggest remedial measures for it.
2. Discuss the social factors affecting health.

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

3. Health hazards of village community.
4. Interview and Questionnaire method.
5. Significance of Medical Social Work.
6. Evil effects of Dowry System.

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

7. Child trafficking.
8. Patrilineal family.
9. Approaches in Social Security.
10. Rural development Programmes in India.
11. Types of Unemployment.

I Year B.P.T. Degree Examination – 19-JULY-2021

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

HUMAN PHYSIOLOGY (RS3 & RS4)
Q.P. CODE: 2702

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 upper motor neuron and lower motor neuron. Differentiate between UMNL and LMNL.
2. Discuss the neuromuscular transmission. Add a note on Myasthenia gravis.
   OR
   With the help of a Spirogram, define and write the values of lung volumes. Add a note on FEV_1.

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

3. Chemical regulation of respiration.
   OR
   Briefly discuss the mechanisms involved in hemostasis.
4. Physiological actions of parathyroid hormone and Calcitonin
5. Define puberty. List the secondary sexual features of males.
6. Explain the resting membrane potential.
7. Discuss the properties of cardiac muscle – refractory period and excitability.
8. With the help of a diagram, describe micturition reflex.
9. Enumerate the GI movements. Describe any two.
10. Explain the gate theory of pain. Note on referred pain.
11. Define GFR. Discuss the factors affecting it.
12. Briefly outline the functions of hypothalamus.
    OR
    Functions of Middle ear.

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

13. State Landsteiner's law of blood grouping.
14. Name the hormones produced in anterior pituitary gland.
15. Define Rheobase and Chronaxie.

16. Any four features of hypothyroidism.
17. What is sex determination?
18. Functions of lymph.
19. Organ of Corti.
20. Any four functions of saliva.
21. Define paresis and paralysis.
22. Define SBP. Give its normal value.

I Year B.P.T. Degree Examination – 23-Jul-2021

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 One) **1 x 10 = 10 Marks**

1. Describe the sources, requirement, functions and deficiency manifestations of calcium. Add a note on the hormones that maintain its homeostasis
2. Describe the reactions of Kreb's cycle and add a note on its energetic

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

3. Dietary fibres
4. Nutritional importance of proteins
5. Buffer systems of the body to maintain the pH of the blood.
6. Competitive inhibition
7. NIDDM
8. BMR
9. Role of Renin-Angiotensin system in maintaining electrolyte balance
10. Ketogenesis
11. Structure of DNA
12. Lipoproteins

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

13. Muscle proteins
14. Scurvy
15. Collagen
16. Isoenzymes
17. Lactose
18. Bile salts
19. Essential aminoacids
20. Deficiency of Vitamin A
21. BMR
22. Mitochondria

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – 16-Jul-2021

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

HUMAN ANATOMY (RS5)
Q.P. CODE: 2731
(QP contains two pages)

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 Brachial Plexus under the following headings:
   a) Origin and Formation
   b) Branches with root values
   c) Applied anatomy
2. Describe the anatomy of Uterus under the following headings:
   a) Location and Position
   b) Parts and Relations
   c) Supports of Uterus
   d) Applied anatomy

   OR

   Describe the anatomy of Blood supply to Brain with a note on applied anatomy.

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

3. Popliteal Fossa-Boundaries and Contents.

   OR

   Cerebellum.
4. Sciatic nerve.
5. Ligaments of Spleen.
6. Right atrium.
7. Bronchopulmonary segments.
8. Biceps Brachii.
9. Radial artery.
10. Relations of Liver.
11. Bed of stomach
12. Microscopy of Cartilage.

    OR

    Sternal angle.

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

13. Mention any four branches of external carotid artery.
14. Draw a neat labelled diagram of multipolar neuron.
15. Name the supports of Uterus.
16. Mention the origin, insertion, nerve supply and action of Tibialis anterior.
17. Mention the three characteristic features of Large Intestine.
18. Upper end of humerus.
19. Draw a neat labelled diagram of microscopy of TS Bone.
20. CSF.
21. Enumerate the contents of Posterior Mediastinum.
22. Carpal Tunnel Syndrome.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – 19-Jul-2021

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

HUMAN PHYSIOLOGY (RS5)
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. Explain the different phases of cardiac cycle with their duration.
2. Explain the neural regulation of respiration. Add a note on periodic breathing.

   OR

   Trace the pathway for pain sensation. Explain gate theory of pain. Describe referred pain.

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

3. Tabulate the difference between the I and II heart sounds.

   OR

   What is flexion withdrawal reflex? Explain its mechanism.
4. Explain the mechanism of spermatogenesis.
5. Briefly discuss the functions of middle ear.
6. Enumerate the functions of skin.
7. Outline the mechanism of intrinsic pathway of coagulation. What is Haemophilia?
8. With the help of a diagram explain the mechanism of micturition reflex.
9. Draw a synapse. Describe the synaptic transmission taking place across the synapse.
10. Define GFR. Explain any four factors regulating GFR.
11. Functions of hypothalamus.
12. Draw the oxygen dissociation curve.

    OR

    Explain the phases of menstrual cycle.

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

13. Functions of Golgi apparatus, endoplasmic reticulum
14. Define isometric and isotonic contraction.
15. Enumerate the contraceptive methods in females.
16. Functions of placental hormones
17. Define PCV (Haematocrit). State its significance.
18. List any four Neuro-transmitters.
19. Write any two differences between fast and slow muscle.
20. Give the normal value of (a) RBC count (b) WBC count (c) Haemoglobin concentration (d) Platelet count.
21. Define resting membrane potential.
22. What is Babinski's sign positive?

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – 23-Jul-2021

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

BIOCHEMISTRY (RS5)

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. Write the sources, RDA, formation of active from of Vitamin D, its biochemical functions and deficiency manifestations.
2. Define Glycolysis. Enumerate the steps of Glycolysis. Add a note on its regulation and energetics.

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

3. Fluid mosaic model of cell membrane.
4. Balance diet.
5. Structure and function of collagen.
6. Biochemical functions of calcium.
7. Basal Metabolic Rate (BMR).
8. Describe the synthesis of ketone bodies and mention two causes of ketosis.
9. Structure and function of DNA.
10. Classification of Enzymes with suitable examples.
11. Mucopolysaccharides.
12. Denaturation of proteins.

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

13. Mention any four compounds synthesized from Glycine.
14. Coenzyme forms of Thiamine and Pyridoxine.
15. Phenyl Ketonuria.
16. Write the normal values of serum total cholesterol and Blood Urea.
17. Van den Bergh reaction.
18. Essential amino acids.
19. Roll of bile salts in lipid digestion.
20. Features of Rickets.
21. Role of ADH in the regulation of water balance.
22. Calorific value of Carbohydrate and Proteins.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – 26-Jul-2021

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. Movement analysis of throwing a ball.
2. Define gait and write the components of gait cycle.

   Or

   Explain different type of power and precision grips with muscle action

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

3. Describe biomechanics of respiration.

   Or

   Define spurt and shunt muscles with an examples.
4. Explain arches of foot and mention the deformities.
5. Extensor hood mechanism of hand.
6. Describe supination and **pronation** twist.
7. Define stress and strain? Explain he load deformation curve.
8. Explain role of intervertebral disc.
9. Define role of patella in knee joint.
10. Explain Newton's laws of motion with an example.
11. What is lever? Explain various type of levers.
12. Write in detail scapula humeral rhythm.

    Or

    Explain screw home mechanism of knee joint.

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

13. Define cadence.
14. Define plasticity.
15. Define COG
16. Define Q angle.
17. What is angle of pull and its importance?
18. Ataxic Gait Describe in short.
19. Define double support time.
20. What is patella Alta.
21. Define carrying angle.
22. What is spring ligament?

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination - 28-Jul-2021

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 psychology. Explain the role of heredity and environment in physical and psychological development of an individual.
2. Define emotion. Explain the theories of emotion.

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

3. Importance of psychology in physiotherapy
4. Explain the principles of organization of perception.
5. Types of conflicts
6. Explain operant theory of learning.

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

7. Projection
8. Concept of IQ
9. Problem solving
10. Different types of Leaders
11. Define personality

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I Year B.P.T. Degree Examination – 28-Jul-2021

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. Discuss the relevance of Sociology to Physiotherapy.
2. Explain the types and functions of Family.

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

3. Case study method.
4. Features of Urban Community.
5. Problems of Working women.
6. Types of Socialization.

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

7. Causes for juvenile delinquency.
8. Filocentric Family.
9. Medical Social Work.
10. Social Heterogeneity.
11. Community development programme in India.

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