Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 03-Jan-2022

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

BASIC ANATOMY (INCLUDING HISTOLOGY)

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology RS2 – Operation Theatre Technology, Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Anaesthesia Technology and Neurosciences Technology)

Q.P. CODE: 3151

(QP contains two pages)

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary

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

1. Name the endocrine glands and describe Supra renal gland in brief.
2. Name the parts of male reproductive system and add a note on gross anatomy of Testis.
3. Describe fourth ventricle.
4. Describe the supports of uterus.
5. Describe the Pancreas under the following headings – parts, relations and blood supply.
6. Describe Femoral artery under the following headings – formation, termination, course and branches.
7. Describe the Blood supply of brain.
8. Describe the boundaries and contents of Middle ear.
9. Describe shoulder joint under the following headings – articulating surfaces, ligaments and movements.
10. Name the muscles of Tongue and add a note on its nerve supply.

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

11. Name all the cranial nerves in order.
12. Cisterna chyli
13. Histology of serous salivary gland
14. Interior of Right atrium
15. Draw and label the parts of long bone.
16. Draw and label the parts of animal cell.
17. Histology of thymus
18. Portal vein – formation, termination and tributaries
19. Medial surface of right lung
20. Blood supply of stomach
21. Difference between small intestine and large intestine
22. Visceral relations of spleen

TO THE POINT ANSWERS (Answer any Five) **5 x 2 = 10 Marks**

23. Name the parts of gall bladder.
24. Name the types of connective tissue.
25. Name the parts of eyeball.
26. Name the parts of brain stem.
27. Name the coverings of kidney.
28. Name the parts of fallopian tube.
29. Name two branches of common iliac artery.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – <<>>

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

PHYSIOLOGY (RS-3)

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology

RS2 – Operation Theatre Technology, Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Anaesthesia Technology and Neurosciences Technology)

Q.P. CODE: 3152

(QP contains two pages)

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

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

1. Describe the functions of platelets.
2. Tabulate the differences between skeletal, cardiac and smooth muscles.
3. Classify WBC. Describe the morphological features with a diagram.
4. Describe the stages of Erythropoiesis.
5. Describe the intrinsic regulation of cardiac output.
6. Explain neuromuscular transmission with a neat labeled diagram.
7. Describe the cardiovascular changes during exercise.
8. Describe the ionic basis of the phases of action potential with a diagram.
9. Explain endometrial changes in a menstrual cycle.
10. Describe synthesis of Thyroid hormone.

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

11. Three differences between cell mediated immunity and humoral immunity.
12. State Landsteiner's Law of blood grouping.
13. Name the types of Diabetes Mellitus and explain the causes for each.
14. What is Normal body temperature? Explain Heat gain and Heat loss.
15. Clinical features of Addison's disease.
16. What is Renal Plasma Threshold for glucose? List normal values.
17. Draw a labeled diagram of Oxygen dissociation curve.
18. Trace the Visual pathway.
19. Enumerate three important functions of hypothalamus.
20. Sensations carried by dorsal column pathway.
21. Functions of Saliva.
22. Posterior pituitary hormones and its function.

TO THE POINT ANSWERS (Answer any Five) **5 x 2 = 10 Marks**

23. What is myopia? How is it corrected?
24. What is Tympanic reflex?
25. List four family planning methods.
26. Van Den Berg's Reactions.
27. Define lung compliance.
28. What are the waves of EEG?
29. Write a note on Impedance matching.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – <<>>

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

BIOCHEMISTRY

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology RS2 – Operation Theatre Technology, Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Anaesthesia Technology and Neurosciences Technology)

Q.P. CODE: 3153

(QP contains two pages)

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

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

1. Explain the chemical and electrical hazards.
2. Write the types and uses of funnels. Add a note on cleaning of glass wares.
3. Write the principle, components and applications of colorimeter.
4. Classify carbohydrates with examples.
5. Define valency, molecular weight, equivalent weight and normality. Give the formula to calculate the normality of concentrated sulphuric acid.
6. Define saturated solution, super saturated solution, standard solution and working standard solution. How do you prepare stock standard solution of glucose?
7. Explain the bicarbonate buffer system.
8. Briefly explain biomedical waste management.
9. Explain the working and uses of water distillation apparatus.
10. Write the principle and working of a pH meter.

SHORT ANSWERS (Answer Any Ten) **10 x 3 = 30 Marks**

11. Write the uses of refrigerator, electronic balance and centrifuge.
12. Components of first aid kit
13. Uses of dessicator, burettes and porcelain dish
14. Functions of lipids
15. Name two acids and two bases.
16. Write the precautionary measures while handling chemical balances.
17. Write the differences between nucleotide and nucleoside with example.
18. Classify amino acids based on nutritional requirement.
19. Define Beer Lambert's law and write its limitations.
20. Define and classify SI units.
21. Hot air oven – components and uses
22. Write the principle of centrifugations and write different types of rotor heads.

TO THE POINT ANSWERS (Answer Any Five) **5 x 2 = 10 Marks**

23. Define acids and bases with examples.
24. Name two prefixes used in metric system.
25. Bunsen burner
26. Define essential fatty acids with example.
27. Classify salts.
28. Two uses of radioactive isotopes
29. Tripod stand and wire gauze

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 10-Jan-2022

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

PATHOLOGY

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology
RS2 – Operation Theatre Technology, Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Anaesthesia Technology and Neurosciences Technology)

Q.P. CODE: 3154

(QP contains two pages)

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

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

1. What is the principle of Romanowsky stains? Give four examples.
2. Blood transfusion reaction
3. Reticulocyte count
4. Mention the different methods used to measure hemoglobin. Write the principle of one of them.
5. CSF analysis
6. Anticoagulants used in the laboratory
7. Compatibility testing in blood bank
8. Mention the steps in tissue processing for routine paraffin sections.
9. Physical examination of urine
10. Mention different kinds of microscopes used in laboratory. Describe about light microscope.

SHORT ANSWERS (Answer Any Ten) **10 x 3 = 30 Marks**

11. Name three clearing agents.
12. Describe an ideal fixative.
13. Procedure of Major cross-matching of blood
14. Types of microtomes
15. Tests to detect protein in urine
16. Name the ketone bodies.
17. Crystals in urine
18. Hematoxylins
19. Name the microtome knives
20. Benedict's test
21. Activated Partial Thromboplastin Time (APTT)
22. Leuckhart's 'L' moulds

TO THE POINT ANSWERS (Answer Any Five) **5 x 2 = 10 Marks**

23. Name any two embedding media.
24. Name two mountants.
25. Bombay blood group
26. Draw a neat labelled diagram of an nutrophile.
27. Care of microscope
28. Define PCV give its normal value.
29. Name two cysts seen in stool.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 10-Jan-2022

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

PATHOLOGY

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology
RS2 – Operation Theatre Technology, Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Anaesthesia Technology and Neurosciences Technology)

Q.P. CODE: 3154

(QP contains two pages)

Corrections

Replace Question No. 28 as follows :

28. Define PCV give its normal value.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 12-Jan-2022

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

MICROBIOLOGY

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology
RS2 – Operation Theatre Technology, Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Anaesthesia Technology and Neurosciences Technology)

Q.P. CODE: 3155

(QP contains two pages)

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

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

1. Robert Koch.
2. Enrichment media.
3. Passive immunity.
4. Laboratory diagnosis of Cryptococcosis.
5. Properties of viruses.
6. Laboratory diagnosis of Ankylostoma duodenale
7. Blood culture for enteric fever.
8. Nosocomial infection.
9. Laboratory diagnosis of Malaria.
10. Classify fungi based on disease production.

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

11. SDA.
12. Thin and Thick smear preparation.
13. Sterilisation controls for autoclave.
14. Kass criteria.
15. Diarrhoeagenic E. coli
16. Uses of commonly used disinfectants in hospitals.
17. Stroke culture.
18. Serological markers of Hepatitis B infection.
19. Define infection. Name any three types of infection.
20. Name three live attenuated vaccines.
21. Name any three differences between fertilized and unfertilized egg of A. lumbricoides.
22. Draw a neat labeled diagram of bacterial cell.

TO THE POINT ANSWERS (Answer any Five) **5 x 2 = 10 Marks**

23. Define antigen-antibody reaction. Give two examples.
24. Name two mechanisms of anaerobiosis
25. Name any two bacteria causing sexually transmitted diseases
26. Colour coding of Biomedical waste.
27. Draw neat labeled diagram of hot air oven.
28. Name any two RNA viruses.
29. Cold sterilisation.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - 03-Jan-2022

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

BASIC ANATOMY INCLUDING HISTOLOGY

(**RS-3** – B.Sc Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Neuro Sciences Technology, Anesthesia Technology, Operation Theatre Technology, Emergency and Trauma Care Technology)
(**RS-4** – B.Sc Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology) Anesthesia and Operation Theatre Technology

Q.P. CODE: 3261

(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. Name the parts of urinary system. Describe urinary bladder.
2. Name the parts of respiratory system. Explain pharynx.
   OR
   Describe parts, papillae, muscles and nerve supply of tongue.

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

3. Difference between small and large intestine.
4. Histology of trachea.
5. Structure of neuron
   OR
   Blood supply of long bone
6. Liver
7. Parotid salivary gland.
8. Cerebellum.
9. Supports of uterus.
10. Middle ear – boundaries and contents
    OR
    Fertilization.
11. Circle of Willis.
12. Structure of compact bone.

SHORT ANSWER (Question No 15 & 20 choice) **10 x 3 = 30 Marks**

13. Name the muscles of anterior abdominal wall.
14. Name the ear ossicles.
15. Name the branches of femoral artery.
    OR
    Name the parts of extra hepatic biliary apparatus.
16. Hilum of lungs.
17. Name the parts of fallopian tube and its function.
18. Name the lobes of cerebrum.
19. Hyaline cartilage.
20. Parts of gall bladder.
    OR
    Name the capsules of kidney.
21. Name the bones forming nasal septum and its arterial supply.
22. Lymphnode.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - <<>>

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

PHYSIOLOGY

(**RS-3** – B.Sc Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Neuro Sciences Technology, Anesthesia Technology, Operation Theatre Technology, Emergency and Trauma Care Technology)
(**RS-4** – B.Sc Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology) Anesthesia and Operation Theatre Technology

Q.P. CODE: 3262

(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. Name the Clotting factors in blood. Describe the extrinsic pathway of blood coagulation. Add a note on anticoagulants.

2. Describe Pyramidal pathway under a) Origin b) Course c) Termination d) Functions.
   OR
   Define NMJ. Describe the events occurring at Neuro muscular junction when an impulse is transmitted across it. Add a note on Myasthenia Gravis.

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

3. Draw a neat labelled diagram of action potential. Add a note on the ions responsible for each phase of action potential.

4. Describe the actions of parathyroid hormone.

5. State Landsteiner's law of blood grouping. Add a note on Erythroblastosis Fetalis.
   OR
   Describe the role of platelets in blood coagulation.

6. Describe the reabsorption of Glucose in kidney tubule.

7. Enumerate and list the properties of cardiac muscle. Describe any three them.

8. Define Reflex action. Draw a neat labelled diagram of a Reflex Arc. List any three properties of reflex action.

9. Define Packed Cell Volume. Give its normal value in males and females. Add a note on its significance.

10. Enumerate the movements of small intestine. Describe any two of them.
    OR
    Define deglutition. Describe the pharyngeal phase of deglutition.

11. Draw a neat labelled diagram of taste pathway.

12. Describe Parturition reflex.

SHORT ANSWER (Question No 15 & 20 choice) **10 x 3 = 30 Marks**

13. Define and classify immunity.

14. Give normal values for a) RBC count b) WBC count c) Platelet count.

15. Define Oxygen – dissociation curve. Add a note on factors affecting the curve.
    OR
    Define a) Intra Pleural pressure b) Intra alveolar pressure c) Transpulmonary pressure.

16. Define and give types of deafness.

17. Define Electroencephalogram. List the waves of EEG.

18. What is Cross matching? Give its significance.

19. Enumerate any two differences between Osmosis and facilitated diffusion.

20. Enumerate any two differences between Diabetes Insipidus and Diabetes Mellitus.

OR

What is Cretinism? List any three signs of cretinism.

21. Name three properties of nerve fibers.

22. Define Dead space and give its types.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - <<>>

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

BIOCHEMISTRY

(**RS-3** – B.Sc Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Neuro Sciences Technology, Anesthesia Technology, Operation Theatre Technology, Emergency and Trauma Care Technology)
(**RS-4** – B.Sc Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology)
Anesthesia and Operation Theatre Technology

Q.P. CODE: 3263

(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. Explain chemistry, dietary source, daily requirement, functions and deficiency disorders of Vitamin D.
2. Define beta oxidation. Enumerate the pathway of beta oxidation of even chain fatty acids and add a note on energetics of beta oxidation of palmitic acid.
   OR
   Write the reactions citric acid cycle. Add a note on energetics.

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

3. Classify proteins based on their functions.
4. Nutritional importance of carbohydrates.
5. What are phospholipids? List their functions.
   OR
   Write in brief preparation of 1000ml of 01 NH_2SO_4. (Gram molecular weight – 98g, Specific gravity – 1.8g/ml and percentage purity – 98%)
6. Outline steps of urea cycle.
7. Define basal metabolic rate and write the about any four factors affecting basal metabolic rate.
8. Classify enzymes with examples.
9. Functions of calcium.
10. Creatinine clearance test.
    OR
    Discuss about digestion of proteins.
11. Define specific dynamic action of food. Mention SDA values for major macronutrients.
12. Explain Watson and Crick model of DNA.

SHORT ANSWER (Question No 15 & 20 choice) **10 x 3 = 30 Marks**

13. Ketosis.
14. List any three functions of heteropolysaccharides.
15. Functions of folic acid.
    OR
    Biological value of proteins.
16. Name the buffers of blood.
17. Write normal serum values of cholesterol, Uric acid, urine creatinine.
18. Name the hypoglycemic and hyperglycemic hormones.
19. Mention the composition of any three disaccharides.
20. Name any three biologically important nucleotides with their function.
    OR
    Henderson Hasselbalch equation and its applications.
21. What are radioactive isotopes? Give two examples with their clinical application.
22. Difference between stock standard and working standard.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - 10-Jan-2022

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

PATHOLOGY

(**RS-3** – B.Sc Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Neuro Sciences Technology, Anesthesia Technology, Operation Theatre Technology, Emergency and Trauma Care Technology)
(**RS-4** – B.Sc Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology)
Anesthesia and Operation Theatre Technology

Q.P. CODE: 3264

(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 methods of collection of blood in Haematology.
2. Discuss the blood transfusion reactions.
   OR
   Differences between benign and malignant Neoplasms.

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

3. Discuss various methods of collection of urine.
4. Discuss one method of determining bleeding time.
5. Discuss procedure for CSF collection.
   OR
   Discuss fate of thrombus.
6. Discuss principle and procedure of Direct Coomb's test.
7. Describe the normal constituents of blood.
8. Discuss hypertrophy with examples.
9. Enumerate the factors affecting wound healing.
10. Enumerate the differences between Transudate and Exudate.
    OR
    Describe examination of Feces.
11. Discuss diagnosis of systemic lupus Erythematosus.
12. Discuss any one method of ESR estimation.

SHORT ANSWER (Question No 15 & 20 choice) **10 x 3 = 30 Marks**

13. List the various body fluids.
14. Name three preservatives of urine.
15. Enumerate any three methods of hemoglobin estimation.
    OR
    Name three types of Embolism.
16. Normal values of hematocrit.
17. Name the tests for proteins in urine.
18. Name various blood grouping systems.
19. List various types of necrosis.
20. Name any three carcinogens.
    OR
    Name any three autoimmune disorders.
21. List the stages of shock.
22. Enumerate the signs of inflammation.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - 12-Jan-2022

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

MICROBIOLOGY

(**RS-3** – B.Sc Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Neuro Sciences Technology, Anesthesia Technology, Operation Theatre Technology, Emergency and Trauma Care Technology)
(**RS-4** – B.Sc Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology)
Anesthesia and Operation Theatre Technology

Q.P. CODE: 3265

(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. Define sterilization. Classify sterilization. Describe in detail about dry heat method of sterilization.
2. Classify Staphylococci. Describe the morphology, clinical manifestations of Staphylococcus aureus. Add a note on laboratory diagnosis of Staphylococcus aureus.
   OR
   Draw neat labelled diagram of Rabies virus. Describe the morphology, Clinical manifestations of Rabies virus. Add a note on its laboratory diagnosis.

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

3. Antony Van Leeuvenhoek.
4. Bacterial flagella.
5. Modes of transmission of infection.
   OR
   Enrichment media.
6. Biomedical waste management.
7. Standard test for syphilis.
8. Difference between amoebic and bacillary dysentery.
9. Laboratory diagnosis of dermatophytes.
10. Halophilic vibrios.
    OR
    Giardiasis.
11. Intestinal amoebiasis.
12. Dengue virus.

SHORT ANSWER (Question No 15 & 20 choice) **10 x 3 = 30 Marks**

13. Lawn culture.
14. Define mechanical vector. Give two examples.
15. Western blot test.
    OR
    Interference.
16. Viral capsid.
17. Name three live vaccines.
18. Name three selective media.
19. Draw neat labeled diagram of bacterial cell.
20. Name any three transport media.
    OR
    Name any three stains used in microbiology lab.
21. Name the diarrhoeagenic E.coli.
22. Name any three media for culturing parasites.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 05-Jul-2022

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

BASIC ANATOMY (INCLUDING HISTOLOGY)

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology
RS2 – Operation Theatre Technology, Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Anaesthesia Technology and Neurosciences Technology)

Q.P. CODE: 3151

(QP contains two pages)

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

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

1. Cavity of larynx
2. Structure of kidney.
3. Prostate gland.
4. Meninges of brain.
5. Structure of cell.
6. Blood supply of brain.
7. Right ventricle.
8. Connective tissue cells.
9. Suprarenal glands.
10. Structure of eyeball.

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

11. Fibrous joints.
12. Neuroglial cells.
13. Name the branches of axillary artery.
14. Name the primary embryonic layers.
15. Thoracic duct.
16. Coronary sinus.
17. Difference between thin skin and thick skin.
18. Bicuspid valve.
19. Name the tracts of spinal cord.
20. Transitional epithelium.
21. Major openings of diaphragm.
22. Sinuses of pericardium

TO THE POINT ANSWERS (Answer any Five) **5 x 2 = 10 Marks**

23. Name the bones of upper limb
24. Name the muscles of mastication.
25. Name the lobes of cerebrum
26. Name the parts of hip bone
27. Name the parts of fallopian tube.
28. Name the structures passing through porta hepatis.
29. Name the parts of respiratory system.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 07-Jul-2022

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

PHYSIOLOGY (RS-3)

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology
RS2 – Operation Theatre Technology, Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Anaesthesia Technology and Neurosciences Technology)

Q.P. CODE: 3152

(QP contains two pages)

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

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

1. What is erythropoiesis? Explain the different stages of erythropoiesis.
2. Define GFR. Give normal value and explain the factors regulating it in brief.
3. Briefly explain Rh incompatibility and its complication.
4. Pubertal changes in male and female
5. Define and give normal value of blood pressure. Add a note on its regulation by baroreceptor mechanism.
6. Give the normal value of blood calcium level. Briefly explain its hormonal regulation.
7. Define synapse. Explain its properties in brief.
8. Give the composition and functions of saliva.
9. Describe the mechanism of skeletal muscle contraction.
10. Explain the different forms of oxygen transport in blood.

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

11. Factors affecting spermatogenesis
12. Functions of plasma proteins
13. Renal tubular maximum for glucose (TmG)
14. Functions of bile salts
15. Define and classify hypoxia.
16. Functions of stomach
17. Triple response
18. Functions of growth hormone
19. Functions of hypothalamus
20. Sensory homunculus
21. Classify anticoagulants and give examples.
22. Artificial kidney

TO THE POINT ANSWERS (Answer any Five)

23. Draw and label neuron.
24. Landsteiner's law
25. Name the tests for ovulation.
26. Tabulate the difference between 1st and 2nd heart sounds
27. Functions of basal ganglia.
28. Differentiate the functions of rods and cones
29. Name the neural centres that regulate the respiration.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 11-Jul-2022

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

BIOCHEMISTRY

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology
RS2 – Operation Theatre Technology, Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Anaesthesia Technology and Neurosciences Technology)

Q.P. CODE: 3153

(QP contains two pages)

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

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

1. Define and classify International System of units (SI Units). How do you convert conventional units to SI units?
2. Principle, components and uses of pH meter.
3. Principle, working mechanism and uses of hot air oven.
4. List the physical chemical and biological hazards occurring in laboratory. Mention the safety measures to be taken to prevent them.
5. Principle, components and uses of centrifuge.
6. Define and classify carbohydrates. Mention the functions of carbohydrates.
7. Safety regulations and first aid in laboratory.
8. Colour codes used for biomedical waste segregation.
9. Define and classify lipids. Mention the functions of lipids.
10. Care, maintenance and uses of analytical balance.

SHORT ANSWERS (Answer Any Ten) **10 x 3 = 30 Marks**

11. Types of pipettes and their uses in laboratory.
12. Refrigerators and Deep freezers.
13. Types of tubes and their uses in laboratory.
14. State Beer Lambert's law and write its limitations.
15. Preparation of 1N HCl.
16. Classification of amino acids based on structure.
17. Precautionary measures to be taken while handling hygroscopic compounds.
18. Cuvettes and its use in measurements.
19. Different types of flasks and their uses in laboratory.
20. Working mechanism and uses of water bath.
21. Uses of a) Bunsen burner b) Tripod stand c) Wire gauze.
22. Discuss the precautions taken while handling chemical spill in laboratory.

TO THE POINT ANSWERS (Answer Any Five) **5 x 2 = 10 Marks**

23. Uses of dessicator and stop watch.
24. Composition of nucleosides and nucleotides.
25. Cleaning of glassware and plastic ware.
26. Preparation and storage of standard glucose solution.
27. Clinical applications of radioactive isotopes.
28. Define a) Normality b) Molarity.
29. Saturated and supersaturated solutions.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 13-Jul-2022

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

PATHOLOGY

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology
RS2 – Operation Theatre Technology, Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Anaesthesia Technology and Neurosciences Technology)

Q.P. CODE: 3154

(QP contains two pages)

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

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

1. Normal erythropoiesis
2. Decalcification
3. Describe stains used in hematology.
4. Automatic tissue processing
5. Microtome
6. PCV
7. Alcoholic fixatives
8. Sahli's method of hemoglobin estimation
9. Chemical examination of urine sugar and proteins
10. Normal haemostasis

SHORT ANSWERS (Answer Any Ten) **10 x 3 = 30 Marks**

11. Mention three grossing instruments.
12. Describe the concentration methods for stool examination.
13. Mention three blood transfusion reactions.
14. Bile salts in urine
15. Microscopic examination of CSF
16. Mounting media
17. Principle of H and E staining
18. Procedure for Leishman stain of peripheral blood smear
19. Describe the structure and function of Eosinophil.
20. Normal values of bleeding time and clotting time
21. Sites of venepuncture
22. Embedding

TO THE POINT ANSWERS (Answer Any Five) **5 x 2 = 10 Marks**

23. Mention types of cross matching.
24. Mention two crystals in urine.
25. Methods of blood grouping
26. Mention two cysts seen in stool.
27. Name two modrants.
28. Name two instruments used in histopathology.
29. Name two types of microscope.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 15-Jul-2022

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

MICROBIOLOGY

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology
RS2 – Operation Theatre Technology, Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Anaesthesia Technology and Neurosciences Technology)

Q.P. CODE: 3155

(QP contains two pages)

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

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

1. Draw neat labelled diagram of bacterial cell and explain.
2. Explain the morphology and laboratory diagnosis of HIV infection.
3. Gram's stain.
4. Bacterial Growth Curve.
5. Laboratory diagnosis of Pulmonary TB.
6. Clinical features and laboratory diagnosis of Syphilis.
7. Candidiasis.
8. Laboratory diagnosis of Ascaris Lumbricoides.
9. Innate immunity.
10. Hot air oven.

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

11. Koch's postulates.
12. Transport media.
13. MRSA
14. Draw a neat diagram of IgA and name the parts.
15. Define agglutination. Give two applications of agglutination.
16. Immunization schedule.
17. What are disinfectants? Give four examples.
18. Morphology of E. histolytica.
19. Draw a neat diagram of Microfilaria and name the parts.
20. Cryptococcosis.
21. Hepatitis C virus.
22. Laboratory diagnosis of Cholera.

TO THE POINT ANSWERS (Answer any Five) **5 x 2 = 10 Marks**

23. Define Antigen and define antibody.
24. Give two examples of enriched media.
25. Name two bacteria causing UTI
26. Name two viral vaccines.
27. Name two spore bearing bacteria.
28. Define carriers with an example.
29. Define Zoonosis? Give two examples.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 15-Jul-2022

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

MICROBIOLOGY

(**RS-3** – B.Sc Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Neuro Sciences Technology, Anesthesia Technology, Operation Theatre Technology, Emergency and Trauma Care Technology)
(**RS-4** – B.Sc Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology)
Anesthesia and Operation Theatre Technology

Q.P. CODE: 3265

(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. Classify Dermatophytes. Describe laboratory diagnosis of dermatophytosis.
2. List the different methods of Antibiotic susceptibility testing. Describe the disc diffusion method.

   OR

   Classify Mycobacterium. Describe laboratory diagnosis of pulmonary tuberculosis. Add a note on BCG.

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

3. **Autoclave**
4. IgM antibody.
5. Laboratory diagnosis of rabies.

   OR

   Laboratory diagnosis enteric fever
6. National Immunization Schedule.
7. Laboratory diagnosis of streptococcus pyogenes.
8. Describe VDRL test.
9. Describe different methods of bacterial culture.
10. Laboratory diagnosis of malaria.

    OR

    Laboratory diagnosis of HIV.
11. Laboratory diagnosis of gonorrhea.
12. Describe Bacterial cell with a neat labeled diagram.

SHORT ANSWER (Question No 15 & 20 choice) **10 x 3 = 30 Marks**

13. Draw a neat labelled diagram of hook worm egg.
14. Morphology of Aspergillus
15. Flagella.

    OR

    Define inclusion body. Give two examples.
16. a. Name the virus causing the current pandemic
    b. What are the two methods to prevent its transmission
17. Name the stain used to identify
    a. Streptococcus pneumoniae …….
    b. C. neoformans in the CSF sample ……..
    c. M. leprae ……..
18. Write the full forms of
    a. TCBS agar
    b. LJ medium
    c. RCM broth
19. Define Enriched media and give one example.

20. Examples of –
    a. Killed viral vaccine
    b. Live attenuated viral vaccine
    c. Toxoid

OR

Define precipitation and agglutination reaction.

21. E. coli: On Gram stain appears as ……
    They are Catalase ……
    They are motile with …….flagella

22. S. aureus: On Gram stain appears as ……
    It is Catalase ……..
    It is Coagulase ……..

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 03-Jan-2022

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

BASIC ANATOMY (INCLUDING HISTOLOGY)

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology
RS2 – Operation Theatre Technology, Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Anaesthesia Technology and Neurosciences Technology)

Q.P. CODE: 3151

(QP contains two pages)

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

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

1. Name the endocrine glands and describe Supra renal gland in brief.
2. Name the parts of male reproductive system and add a note on gross anatomy of Testis.
3. Describe fourth ventricle.
4. Describe the supports of uterus.
5. Describe the Pancreas under the following headings – parts, relations and blood supply.
6. Describe Femoral artery under the following headings – formation, termination, course and branches.
7. Describe the Blood supply of brain.
8. Describe the boundaries and contents of Middle ear.
9. Describe shoulder joint under the following headings – articulating surfaces, ligaments and movements.
10. Name the muscles of Tongue and add a note on its nerve supply.

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

11. Name all the cranial nerves in order.
12. Cisterna chyli
13. Histology of serous salivary gland
14. Interior of Right atrium
15. Draw and label the parts of long bone.
16. Draw and label the parts of animal cell.
17. Histology of thymus
18. Portal vein – formation, termination and tributaries
19. Medial surface of right lung
20. Blood supply of stomach
21. Difference between small intestine and large intestine
22. Visceral relations of spleen

TO THE POINT ANSWERS (Answer any Five) **5 x 2 = 10 Marks**

23. Name the parts of gall bladder.
24. Name the types of connective tissue.
25. Name the parts of eyeball.
26. Name the parts of brain stem.
27. Name the coverings of kidney.
28. Name the parts of fallopian tube.
29. Name two branches of common iliac artery.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – <<>>

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

PHYSIOLOGY (RS-3)

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology
RS2 – Operation Theatre Technology, Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Anaesthesia Technology and Neurosciences Technology)

Q.P. CODE: 3152

(QP contains two pages)

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

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

1. Describe the functions of platelets.
2. Tabulate the differences between skeletal, cardiac and smooth muscles.
3. Classify WBC. Describe the morphological features with a diagram.
4. Describe the stages of Erythropoiesis.
5. Describe the intrinsic regulation of cardiac output.
6. Explain neuromuscular transmission with a neat labeled diagram.
7. Describe the cardiovascular changes during exercise.
8. Describe the ionic basis of the phases of action potential with a diagram.
9. Explain endometrial changes in a menstrual cycle.
10. Describe synthesis of Thyroid hormone.

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

11. Three differences between cell mediated immunity and humoral immunity.
12. State Landsteiner's Law of blood grouping.
13. Name the types of Diabetes Mellitus and explain the causes for each.
14. What is Normal body temperature? Explain Heat gain and Heat loss.
15. Clinical features of Addison's disease.
16. What is Renal Plasma Threshold for glucose? List normal values.
17. Draw a labeled diagram of Oxygen dissociation curve.
18. Trace the Visual pathway.
19. Enumerate three important functions of hypothalamus.
20. Sensations carried by dorsal column pathway.
21. Functions of Saliva.
22. Posterior pituitary hormones and its function.

TO THE POINT ANSWERS (Answer any Five) **5 x 2 = 10 Marks**

23. What is myopia? How is it corrected?
24. What is Tympanic reflex?
25. List four family planning methods.
26. Van Den Berg's Reactions.
27. Define lung compliance.
28. What are the waves of EEG?
29. Write a note on Impedance matching.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 16-Dec-2022

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

BIOCHEMISTRY

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology RS2 – Operation Theatre Technology, Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Anaesthesia Technology and Neurosciences Technology)

Q.P. CODE: 3153

(QP contains two pages)

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

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

1. Mention the types of laboratory balances. Write about its maintenance and use.
2. Write the principle on which the pH meter works. Mention the components of pH meter and its uses in the laboratory.
3. Explain the responsibilities of a health care personnel.
4. Classify the hazards that can happen in laboratory. Mention the safety measures to be taken to prevent them.
5. Explain the principle of working of a colorimeter. Draw a neat labeled diagram to show its components.
6. Write the principle and working mechanism of a refrigerator. Mention the uses of refrigerator and deep freezers.
7. Define pipette. Mention the types of pipettes used in the laboratory. Write the advantages of automated pipettes.
8. How are biomedical waste segregated? Mention about its importance.
9. What is first aid? Mention the items and their uses in first aid kit.
10. Name the purine and pyrimidine bases. Mention the composition of nucleosides and nucleotides with an example.

SHORT ANSWERS (Answer Any Ten) **10 x 3 = 30 Marks**

11. Different types of funnels used in the laboratory.
12. Working mechanism and use of water bath.
13. Biochemical functions of lipids.
14. Cleaning of glassware and plastic ware in the laboratory.
15. Preparation of 1M NaOH.
16. Classification of amino acids based on nutritional requirement.
17. Define a) Svedberg unit b) Centrifugal force c) RPM.
18. Define carbohydrates. Classify carbohydrates and give one example to each class.
19. Technique for preparation and storage of standard albumin solution.
20. What are radioisotopes? Give two examples of radio isotopes and mention their applications.
21. Uses of a) Folin Wu tube b) Petri dish c) Stop watch.
22. Metric system and common laboratory measurements.

TO THE POINT ANSWERS (Answer Any Five) **5 x 2 = 10 Marks**

23. Uses of magnetic stirrers.
24. Dilution factors.
25. What are reducing disaccharides? Give two examples.
26. Define a) Normality b) Molarity.
27. What is a Buffer?
28. What are essential amino acids? Give two examples.
29. Uses of measuring cylinders.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 19-Dec-2022

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

PATHOLOGY

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology
RS2 – Operation Theatre Technology, Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Anaesthesia Technology and Neurosciences Technology)

Q.P. CODE: 3154

(QP contains two pages)

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

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

1. Describe the steps involved in Haematoxylin and Eosin (H&E) staining.
2. Describe the measurement of Haematocrit.
3. Honing and stropping of microtome knives.
4. Describe mounting of specimens in pathology.
5. Physical examination of urine.
6. List the properties of an ideal fixative.
7. WBC count.
8. List the anticoagulants used in hematology laboratory along with their uses and modes of action.
9. Examination of Sputum.
10. Quality control in laboratory.

SHORT ANSWERS (Answer Any Ten) **10 x 3 = 30 Marks**

11. Tests for completion of decalcification.
12. Preparation of buffered Formalin fixative.
13. What is Erythrocyte Sedimentation Rate (ESR)? Mention two methods of measuring ESR.
14. CSF examination findings in pyogenic meningitis.
15. Dehydrating agents and their uses.
16. Microscopic examination of stool.
17. Laboratory safety guidelines.
18. Define Mean corpuscular Volume (MCV) and give its normal range.
19. Methods of Haemoglobin estimation.
20. Draw and label the **parts of simple Hysterectomy specimen.**
21. Types of crossmatch.
22. Activated Partial Thromboplastin Time (APTT).

TO THE POINT ANSWERS (Answer Any Five) **5 x 2 = 10 Marks**

23. Draw a neat labelled diagram of an eosinophil.
24. Mention two types of Eosin.
25. Mention two crystals in urine.
26. Mention two ketone bodies.
27. Define clotting time.
28. Mention two embedding media.
29. Mention two slide mounting media.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - 21-Dec-2022

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

MICROBIOLOGY

(RS 3 – Medical Laboratory Technology, Medical Imaging Technology & Radiotherapy
RS2 – Operation Theatre Technology, Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Anaesthesia Technology & Neuro Sciences Technology)

Q.P. CODE: 3155

(QP contains two pages)

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

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

1. Briefly explain acquired immunity.
2. Bacterial cell wall
3. Briefly explain the laboratory diagnosis of Bacillary dysentery.
4. Describe the clinical manifestation and laboratory diagnosis of Ascaris lumbricoides.
5. Explain the laboratory diagnosis of Candidiasis.
6. Write a note on Hepatitis A virus – clinical manifestation and laboratory diagnosis.
7. Bacterial filters
8. Anaerobic culture methods
9. Antimicrobial susceptibility testing
10. Immunization schedule

SHORT ESSAYS (Answer any Ten) **10 x 3 = 30 Marks**

11. Enrichment media
12. Bacterial flagella
13. Gram staining
14. Inspissation
15. Laboratory diagnosis of Cryptococcosis
16. Bacterial growth curve
17. Black water fever
18. Name any three clinical manifestations caused by Staphylococcus aureus.
19. CAMP reaction
20. Hepatitis "B" surface antigen
21. DEC provocation test
22. Write a note on fumigation.

TO THE POINT ANSWERS (Answer any Five) **5 x 2 = 10 Marks**

23. Name two bacteria causing nosocomial infections.
24. Name two bacteria causing UTI.
25. Name two agglutination tests.
26. Name two motile bacteria.
27. Name two killed viral vaccines.
28. Name two transport media.
29. Name two opportunistic fungal infections.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - 12-Dec-2022

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

BASIC ANATOMY INCLUDING HISTOLOGY

(**RS-3** – B.Sc Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Neuro Sciences Technology, Anesthesia Technology, Operation Theatre Technology, Emergency and Trauma Care Technology)
(**RS-4** – B.Sc Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology)
Anesthesia and Operation Theatre Technology

Q.P. CODE: 3261

(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. Name the endocrine glands. Describe thyroid gland in detail.
2. Draw the diagrams of sulci and gyri on the surfaces of cerebrum.
   OR
   Describe the structure of eyeball in detail.

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

3. Spermatogenesis.
4. Histology of elastic cartilage.
5. Neuroglial cells.
   OR
   Inter-vertebral disc.
6. Right ventricle.
7. Bronchopulmonary segments of lung.
8. Structure of nephron.
9. Corpus callosum – parts, fibres and function.
10. **Stomach**
    OR
    Difference between small intestine and intestine.
11. Classify epithelium and write in detail about columnar epithelium.
12. Structure of cell.

SHORT ANSWER (Question No 15 & 20 choice) **10 x 3 = 30 Marks**

13. Name the cranial nerves in order.
14. Name the paranasal air sinuses.
15. Name the structures passing through the major opening of diaphragm.
    OR
    Name the branches of abdominal aorta.
16. Name the dural venous sinuses.

----2

17. Microscopic structure of cardiac muscle.
18. Tributaries of inferior vena cava.
19. Nerve supply of tongue.
20. Name the subdivisions of parietal pleura
    OR
    structures present in mediastinum.
21. Prostate gland.
22. Name the subdivisions of brain.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - 14-Dec-2022

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

PHYSIOLOGY

(**RS-3** – B.Sc Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Neuro Sciences Technology, Anesthesia Technology, Operation Theatre Technology, Emergency and Trauma Care Technology)
(**RS-4** – B.Sc Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology)
Anesthesia and Operation Theatre Technology

Q.P. CODE: 3262

(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 two mechanism of blood coagulation. Define anticoagulants. Explain the actions of any two.

2. Describe the origin, course, termination and functions of corticospinal tract (Pyramidal tract) with the help of a labelled diagram.
   OR
   Describe the counter-current mechanism of kidney with the diagram.

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

3. Define hypoxia. Explain the types of hypoxia.
4. Explain the transmission at neuromuscular junction.
5. With the help of a diagram, briefly describe the defecation reflex.
   OR
   Explain the stages of spermatogenesis. List the factors regulating it.
6. Describe the conducting system of heart with a labelled diagram.
7. Enumerate the posterior pituitary hormones. Write the functions of oxytocin.
8. What are the common errors of refraction and how are they corrected?
9. Actions of thyroid hormone.
10. Describe the formation, circulation, composition and functions of CSF.
    OR
    Explain the phases of deglutition.
11. Tabulate the differences between myelinated and unmyelinated nerve fibers.
12. Explain the mechanism of negative feedback mechanism in hormonal regulation using an example.

SHORT ANSWER (Question No 15 & 20 choice) **10 x 3 = 30 Marks**

13. Functions of platelets.
14. Define Blood pressure. Give its normal value.
15. Define synapse. Classify types of synapses.
    OR
    Clinical signs of Hypothyroidism.
16. Name three function of Placenta.
17. Functions of Juxta-glomerular apparatus.
18. Lumbar puncture.
19. Contractile elements of skeletal muscle.
20. List any three functions of liver
    OR
    What is normal ESR? What is its clinical importance?
21. Draw a labelled diagram of a neuron.
22. List any four clinical features of Acromegaly.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - 16-Dec-2022

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

BIOCHEMISTRY

(**RS-3** – B.Sc Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Neuro Sciences Technology, Anesthesia Technology, Operation Theatre Technology, Emergency and Trauma Care Technology)
(**RS-4** – B.Sc Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology)
Anesthesia and Operation Theatre Technology

Q.P. CODE: 3263

(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. Classify carbohydrates with suitable examples and describe the structure of starch.
2. Explain chemistry, dietary source, daily requirement, functions and deficiency disorders of Vitamin D.

   OR

   Explain the sources and functions of calcium. Discuss the role of vitamin D in calcium homeostasis and write the normal calcium reference range in blood.

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

3. What are buffers? Mention the buffers present in plasma, intracellular fluid and urine.
4. Classify lipids with suitable example.
5. Explain the Watson and crick model of DNA.

   OR

   Definition and functions of essential fatty acids with examples.
6. Define enzymes. Classify them with example.
7. Discuss the digestion and absorption of carbohydrates.
8. What are clearance tests? List the substances used for clearance tests. Write its significance.
9. Elucidate steps of urea cycle.
10. Explain functions and deficiency manifestation of Thiamin.

    OR

    Biologically important peptides.
11. Explain the steps of beta oxidation of fatty acids.
12. **What is Gluconeogenesis ? Write the steps involved in formation of glucose from Alanine.**

SHORT ANSWER (Question No 15 & 20 choice) **10 x 3 = 30 Marks**

13. Urinary acidification test.
14. What are microminerals? Give two examples.
15. Name the ketone bodies and write two conditions for Ketonuria.

    OR

    Preparation of standard solution.
16. Define proenzymes. Give two examples.
17. What are essential amino acids? Give four examples.
18. Discuss the role of HCl in digestion.
19. Define Specific Dynamic Action of food. Mention SDA values for major macronutrients.
20. What are radioisotopes? Give two examples.

    OR

    What is the strength of 2M NaOH in terms of percentage?
21. Give normal level of:
    a) Fasting plasma glucose
    b) Serum Total Bilirubin
    c) Serum Urea
22. Define a) Molarity b) Normality c) Molality.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - 19-Dec-2022

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

PATHOLOGY

(**RS-3** – B.Sc Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Neuro Sciences Technology, Anesthesia Technology, Operation Theatre Technology, Emergency and Trauma Care Technology)
(**RS-4** – B.Sc Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology)
Anesthesia and Operation Theatre Technology

Q.P. CODE: 3264

(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 examination of CSF in detail.
2. Describe the cellular events in acute inflammation.
   OR
   Describe collection and processing of blood for transfusions.

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

3. Physical examination of urine.
4. Anticoagulants used in haematology.
5. Definition and estimation of packed cell volume (PCV)
   OR
   Microscopic examination of sputum.
6. Blood compatibility testing.
7. Factors affecting wound healing.
8. Fate of thrombus.
9. Lab diagnosis of SLE.
10. Types of shock.
    OR
    Grading and staging of cancers.
11. Oncogenes.
12. Differences between reversible and irreversible cell injury.

SHORT ANSWER (Question No 15 & 20 choice) **10 x 3 = 30 Marks**

13. Name three casts found in urine.
14. Name three ova found in feces.
15. List any three transfusion reactions.
    OR
    Name three methods of haemoglobin estimation.
16. Define Prothrombin time (PT).
17. Dystrophic calcification.
18. List three features of malignant neoplasms.
19. List three types of emboli.
20. Define hypertrophy and give an example.
    OR
    Virchow's triad.
21. Name three microbial agents causing cancers.
22. Define infarction.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 21-Dec-2022

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

MICROBIOLOGY

(**RS-3** – B.Sc Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Neuro Sciences Technology, Anesthesia Technology, Operation Theatre Technology, Emergency and Trauma Care Technology)
(**RS-4** – B.Sc Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology)
Anesthesia and Operation Theatre Technology

Q.P. CODE: 3265

(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. Define antigen. Define antibody. Define antigen antibody reactions. List various antigen antibody reactions.

2. List types of immunity and describe the differences between active and passive immunity.
   OR
   Classify Nosocomial infections. Describe in detail the standard precautions to be used to prevent these infections in health care settings.

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

3. Laboratory diagnosis of Gonorrhoea.
4. Candida species – diseases caused and laboratory diagnosis.
5. Methods of cultivation of bacteria.
   OR
   Methods of cultivation of viruses.
6. List infections caused by Staphylococcus aureus and write a note on MRSA.
7. Laboratory diagnosis of malaria.
8. Prophylaxis of rabies infection.
9. Importance of biomedical waste management in prevention of health care associated infections.
10. List bacteria that can cause pneumonia in humans and write briefly the laboratory diagnosis of pulmonary tuberculosis.
    OR
    List organisms that can cause Sexually transmitted diseases in humans and enumerate the tests used in the laboratory diagnosis of Syphilis.
11. Morphology and clinical features of A. lumbricoides.
12. Infections caused by Streptococcus pyogenes.

SHORT ANSWER (Question No 15 & 20 choice) **10 x 3 = 30 Marks**

13. Sources of infections to humans.
14. Name three opportunistic infections.
15. Enumerate three tests and the samples to be sent for the diagnosis of typhoid fever.
    OR
    Name three tests used in the diagnosis of Dengue infections.
16. El Tor vibrio.
17. Name three viral infections transmitted through blood and body fluids.
18. List the methods used in antibiotic susceptibility testing.
19. Name three chemical disinfectants used in the hospitals.
20. Name three stains used to stain bacteria.
    OR
    Name three selective media.
21. Name three fungi that affect the skin.
22. Name three live attenuated vaccines.