Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 16-May-2023

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. Describe the gross anatomy of Spleen.
2. Describe the brachial plexus.
3. Describe Coronary circulation.
4. Draw neat and labeled diagram of nephron.
5. Pleura
6. Describe Pituitary gland.
7. Classify Connective tissue with examples.
8. Medulla oblongata
9. Describe the medial surface of Cerebrum.
10. Describe gross anatomy of Left kidney.

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

11. Name the extra ocular muscles.
12. Name the parts of extra hepatic biliary apparatus.
13. Name the supports of uterus.
14. Branches of common carotid artery
15. Lobes of prostate
16. Formation and tributaries of inferior vena cava
17. Pulmonary circulation
18. Spermatogenesis
19. Histology of thin skin
20. Draw and label the parts of eyeball.
21. Lymphatic drainage of mammary gland
22. Histology of pancreas

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

23. Name the parts of corpus callosum
24. Name the papillae of tongue.
25. Name the types of simple epithelium.
26. Name the ventricles of brain.
27. Name the four chambers of heart.
28. Name the parts of male urethra.
29. Name the parts of respiratory system.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 18-May-2023

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. Intrinsic mechanism of blood coagulation
2. Describe ventricular events during cardiac cycle.
3. Draw and explain lung volumes and capacities.
4. Describe deglutition process.
5. Corticospinal tract
6. Actions of testosterone
7. Excitation-Contraction coupling
8. Causes and features of Cushing's syndrome
9. Explain the Accommodation reflex.
10. Micturition reflex

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

11. ABO blood grouping
12. Actions of Prolactin
13. Functions of kidney
14. List the secondary sexual characters in males.
15. List the actions of saliva.
16. Dead space
17. Diabetes mellitus – types, cause and clinical features
18. What is a Synapse? Enumerate six properties of Synapse.
19. Myxoedema
20. Functions of plasma proteins
21. Starling's law of Force of Contraction
22. List the properties of cardiac muscle.

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

23. List the four primary taste sensations.
24. Define alveolar ventilation with normal value.
25. Name the respiratory centers.
26. Triple response
27. Saltatory conduction
28. Draw and label Neuro Muscular Junction
29. List the four functions of thrombocytes.

*****

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 20-May-2023

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. Write Henderson Hasselbalch equation. Mention its applications.
2. Define molarity. Write the procedure of preparation of 2M NaOH solution.
3. Principle and applications of colorimetry
4. Principle and components of pH meter
5. How do you prepare 1N HCI from cone HCI solution? Explain the basis.
6. Principle and working of centrifuge
7. Use, care and maintenance of waterbath
8. Classification of lipids with examples.
9. Definition and classification of SI units
10. Name the different types of waste produced in the laboratory. Explain how they are segregated?

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

11. What are hygroscopic substances? Give two examples.
12. What are essential amino acids? Name any two essential amino acids.
13. How to convert 2N NaOH into percent solution?
14. Define buffers. Give two examples.
15. Fire safety in laboratory
16. What are poly unsaturated fatty acids? Give two examples
17. What are isotopes? Mention two uses of radio isotopes.
18. What is standard solution? Write how to prepare 5% Albumin solution.
19. Significance of Borosilicate glass
20. Define a) Equivalent weight b) Molecular weight of elements
21. What are a) Monosaccharides b) Disaccharides c) Polysaccharides
22. What are for one weak and strong acid?

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

23. Mention uses of a) Conical flask b) Burette
24. Define bases. Give two examples.
25. Write the components spill handling kit.
26. Mention uses of a) Cuvettes b) Tripod stand
27. Functions of carbohydrates
28. Define a) Saturated solution b) Supersaturated solution
29. Define normality.

*****

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 23-May-2023

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. Composition and preparation of Harris hematoxylin
2. Colour coding for biomedical waste management
3. Quality control in laboratory
4. Technique of mounting
5. Normal Myelopoiesis
6. Prothrombin time estimation and the normal value
7. Technique of section cutting using rotary microtome
8. Semen analysis
9. Parameters in physical examination of urine
10. Transfusion reactions

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

11. Properties of ideal decalcifying agent
12. Bleeding time
13. Tests to detect proteins in urine
14. Mountants
15. Crystals in urine
16. Crossmatching
17. Formaldehyde
18. Mention the normal differential leukocyte count.
19. Mention the normal values of mean corpuscular volume (MCV), mean corpuscular hemoglobin (MCH) and mean corpuscular hemoglobin concentration (MCHC).
20. Mention any three transfusion transmitted infections.
21. Stages of Erythrocyte Sedimentation Rate
22. Mention any three anticoagulants used in hematology.

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

23. Name the constituents of double oxalate.
24. Name any two compound fixatives.
25. Name any two casts seen in urine.
26. Name any two conditions causing Eosinophilia.
27. Name any two decalcifying agents.
28. Name any two embedding media.
29. Name any two body fluids.

*****

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 25-May-2023

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. Write a note on Aspergillosis.
2. Explain the laboratory diagnosis of typhoid fever.
3. Describe the laboratory diagnosis and prophylaxis of rabies.
4. Write in detail about biomedical waste management.
5. Explain moist heat method of sterilization.
6. Write about lab diagnosis and prophylaxis of Polio.
7. Bacterial spores.
8. Write in detail about the laboratory diagnosis of pulmonary tuberculosis.
9. Explain in detail about clinical features and laboratory diagnosis of malaria.
10. Write in detail about innate immunity.

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

11. Name three contributions of Antony van Leeuwenhoek.
12. Name the morphological classification of fungi.
13. RPR test.
14. Leprosy.
15. Coagulase test.
16. Write a note on Diarrhoeagenic of E. coli.
17. Write a note on Hepatitis A
18. Differential media.
19. Define and classify vaccines.
20. Explain wet mount preparation.
21. Write about specimen collection in case of UTI.
22. Write a note on MRSA.

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

23. Name two general properties of virus
24. Draw a neat labelled diagram of hot air oven.
25. Pasteurization.
26. Hanging drop
27. Name two species of candida.
28. Name two disinfectants.
29. Name two diseases caused by Staphylococcus aureus.

*****

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - 16-May-2023

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 female reproductive system. Describe Uterus in detail.
2. Explain the blood supply of Heart.
   OR
   Name the parts of digestive system and write in detail about stomach.

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

3. Classification of synovial joints with example.
4. Fertilization.
5. Lacrimal apparatus.
   OR
   Cartilages and muscles of larynx.
6. Structure of kidney.
7. Functional areas of cerebrum.
8. Contents of spermatic cord.
9. Deltoid muscle.
10. Histology of pituitary gland.
    OR
    Meninges of brain.
11. Anatomical position, planes and terms.
12. Vertebral column.

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

13. Gluteus maximus origin and nerve supply
14. Name the appendages of skin.
15. Name the cranial nerves in order.
    OR
    Name the veins opening to right atrium.
16. Name the carpal bones.
17. Histology of hyaline cartilage.
18. Name the branches of external carotid artery.
19. Thoracic duct.
20. Ligaments of liver.
    OR
    Islets of Langerhans.
21. Name the constructions and arterial supply of oesophagus.
22. Parts of brain stem.

Rajiv Gandhi University of Health Sciences, Karnataka

Year B.Sc. Allied Health Sciences Degree Examination - 18-May-2023

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. Explain oxygen transport in the blood. Describe oxygen dissociation curve.
2. Describe the functions and regulations of secretion of Thyroxine. What are the clinical manifestations of Cretinism?
   OR
   Name the clotting factors. Describe the intrinsic mechanism of blood coagulation in detail.

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

3. With a labelled diagram describe micturition reflex.
4. What is mismatched blood transfusion? Write the complications of mismatched blood transfusion.
5. Secondary sexual characteristics in females.
   OR
   Draw ECG and explain the electrocardiogram (ECG) with wave and intervals.
6. What is receptor? Discuss any three properties of receptor.
7. Mention the contents and functions of middle ear. Explain the tympanic reflex.
8. Differentiate between upper and lower motor neuron lesion.
9. Neural regulation of respiration.
10. Describe the molecular basis of skeletal muscle contraction.
    OR
    Name the posterior pituitary hormones. Describe their physiological actions.
11. Define hypoxia. Explain the types of hypoxia.
12. Explain the types of blood transfusion.

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

13. What are the differences between isotonic and isometric contractions?
14. List the actions of saliva.
15. Define Jaundice. Name the three types of Jaundice.
    OR
    Contraceptive methods in males.
16. Define cardiac output. Give the normal value.
17. Define dead space. List the types of dead space. Give its normal value.
18. Functions of cerebellum.
19. Functions of hormones ADH.
20. Write briefly about artificial kidney.
    OR
    Organ of Corti.
21. Name any four enzymes present in the pancreatic juice.
22. Mention clinical features of diabetes mellitus.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - 20-May-2023

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. Discuss the sources, daily requirement, biochemical functions and deficiency manifestations of vitamin A.

2. Describe the pathway of gluconeogenesis. Add a note on its regulation.

   Or

   What are proteins? Enumerate the functions. Discuss the classification of proteins based on chemical nature and solubility.

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

3. Discuss the functions and deficiency manifestations of pyridoxine.

4. Describe the reactions of β-oxidation of palmitic acid. Add a note on the energetic.

5. What are ketone bodies? Discuss the biochemical basis of ketosis in starvation and diabetes mellitus.

   Or

   Define peptides. How are they formed? Discuss the functions of any three biologically important peptides.

6. Discuss the biological effects of radiations. Give the applications of three radioactive isotopes in medical field.

7. Describe the common causes and clinical features of vitamin D deficiency.

8. Discuss Oxidative deamination and non-oxidative deamination giving suitable examples.

9. What are percent solutions? Explain the technique of preparing normal saline.

10. Discuss the role of hyperglycemic and hypoglycemic hormone in the regulation of blood glucose.

    Or

    Saturated and unsaturated fatty acids – definition, sources and examples.

11. What are amino acids? Classify amino acids based on metabolic fate.

12. Discuss the regulation of pH of blood by phosphate buffer system

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

13. Differentiate between DNA and RNA.

14. Megaloblastic anaemia.

15. Normal serum levels and altered clinical conditions for urea and creatinine in serum

    Or

    Define SI units. Discuss base units citing suitable examples.

16. Give the composition of sucrose, lactose and maltose and mention the linkages.

17. Balanced diet.

18. Define mucopolysaccharides and enumerate the functions of any two of them.

19. Enumerate the functions of glutathione, oxytocin and vasopressin.

20. Precautions during sample collection and transport of samples for blood gas analysis. Normal leve blood pO_2 and pCO_2.

Or

Insulin clearance.

21. Anaplerotic reactions of TCA cycle.

22. Causes and disorders of iron toxicity.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - 23-May-2023

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. Define inflammation. Mention the causes, signs and types of inflammation. Add a note on factors that affect wound healing.

2. What are anticoagulants? List the anticoagulants used in a clinical laboratory, with their mode of action and the tests for which they are used.
   OR
   Write in detail the procedure and positive pathological findings in Urine sediment (Microscopy examination).

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

3. Write the principle of APTT. List three causes of prolonged APTT.
4. Tabulate the differences in benign and malignant tumors.
5. Define ESR. Describe the methods of determining ESR and causes of increased ESR.
   OR
   List the methods of Hemoglobin estimation. Explain the principle, procedure and interpretation of any one.
6. Describe the methods of determining ABO blood grouping.
7. Discuss the procedure and indications of CSF examination. List the lab findings of CSF in Pyogenic meningitis.
8. What is Autoimmunity? Classify Autoimmune disorders and give examples.
9. Define Neoplasia. Explain Grading and staging of cancers.
10. What is infarction? Explain the types of infarction
    OR
    Define shock. List the types of shock and give examples.
11. List the differences between Transudate and Exudate.
12. What is Edema? List the causes of Edema.

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

13. **Define atrophy. Write the causes of atrophy**
14. Draw a representative diagram of an Eosinophil.
15. What is Hematocrit? Write its normal range.
    OR
    Mention the types of Crossmatching.
16. Name three Non-bile stained ova.
17. What is a vacutainer? Give two advantages of blood collection using vaccutainers.
18. Define Necrosis.
19. List any three types of Emboli.
20. What is Cell injury? Mention types of cell injury.
    OR
    What are the components of Virchow's triad?
21. Mention the laboratory tests done for diagnosis of SLE.
22. Mention the types of pathological calcification and give examples.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 25-May-2023

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 the biomedical waste. Enumerate the methods used in the treatment of this waste.
2. List methods of moist sterilization. Describe in detail the functioning and uses of Autoclave.
   OR
   List viruses transmitted by insect vectors. Describe the laboratory diagnosis of dengue infection.

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

3. Modes of spread and methods of prevention of HCV infection.
4. **Laboratory diagnosis of Mycobacterium tuberculosis.**
5. Laboratory diagnosis of T. solium infection.
   OR
   Laboratory diagnosis of hook worm infection.
6. Infections caused by Aspergillus species.
7. Immunization schedule followed in India.
8. Mechanism of Innate immunity.
9. Methods of gaseous sterilization.
10. Methods of sterilization by filtration.
    OR
    Bacterial growth curve.
11. Laboratory diagnosis of enteric fever.
12. Draw a neat labelled diagram of the bacterial cell.

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

13. Name three **bacteria** causing genitourinary infections.
14. Name three bacteria causing infections of the lung.
15. **MRSA**
    Or
    ORAL Thrush
16. Name three viral infections transmitted through food and water.
17. Laboratory diagnosis of leprosy.
18. Name three dermatophytes.
19. List three antigen antibody reactions.
20. Name three killed viral vaccines.
    OR
    Name any three Nosocomial infections and the bacteria causing them.
21. Laboratory diagnosis of parasitic infections.
22. KOH mount.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 22-Nov-2023

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. Broncho-pulmonary segments of lung.
2. Parts and ligament of urinary bladder.
3. Classification of cartilage.
4. Anatomical position, terms and planes.
5. Right coronary artery.
6. Supports of Uterus.
7. Thyroid gland.
8. Sulci and gyri on the supero-lateral surface of cerebrum
9. Extra-ocular muscles.
10. Histology of large sized artery.

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

11. Parts of long bone with a diagram.
12. Islets of Langerhans.
13. Epididymis.
14. Corpus callosum.
15. Name the branches of external carotid artery.
16. Para nasal air sinuses.
17. Right lymphatic duct.
18. Oogenesis.
19. Optic nerve.
20. **Name the types of Muscles**
21. Submandibular gland.
22. Axillary lymph nodes.

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

23. Name the bones of lower limb.
24. Name the hamstring muscles.
25. Median cubital vein.
26. Name any four cranial nerves.
27. Tricuspid valve
28. Mitochondria.
29. Name the parts of small intestine.

.....

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - 22-Nov-2023

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

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 all the endocrine glands. Describe the thyroid gland in detail.
2. Name the parts of male reproductive system. Describe the gross anatomy of testis in detail.
   OR
   Classify the synovial joints. Describe the bones forming and ligaments of shoulder joint in detail.

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

3. Name the muscles and nerves supply of the tongue.
4. Describe the formation, termination and tributaries of portal vein.
5. Describe the right atrium of heart.
   OR
   Describe the bronchopulmonary segments of lungs.
6. Describe the nasal septum.
7. Describe the hamstring muscles of thigh.
8. Describe the ligaments and visceral surface of liver.
9. Describe the boundaries and contents of popliteal fossa.
10. Pectoralis major muscle.
    OR
    Describe the course and branches of facial nerve in face.
11. Microscopic structure of thick skin.
12. Describe the parts and interior of the urinary bladder.

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

13. Name the ventricles of the brain.
14. Name the muscles of mastication.
15. Name the parts of pharynx.
    OR
    Name the folds of duramater.
16. Enumerate the contents of femoral triangle.
17. Name any three veins of the body.
18. Name the cranial nerves in order.
19. Name all bones of upper limb.
20. Name the parts of female reproductive system.
    OR
    Name the salivary glands.
21. Name the layers of the eyeball.
22. Name the structures at the hilum of kidney.

*****

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 27-Nov-2023

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

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. Write the principle, components and working of analytical balance.
2. Segregation of biomedical wastes.
3. Define and classify lipids.
4. Henderson-Hasselbach equation.
5. Classification of amino acids based on structure.
6. Define centrifugal force. Describe the working and types of centrifuges.
7. Define nucleotides and nucleosides. Add a note on its functions.
8. Classification of monosaccharides.
9. Define normality. How do you prepare 100ml of 2N NaOH from 10N NaOH?
10. Explain physical and chemical hazards.

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

11. Saturated solutions.
12. Diagram of water distillation plant. Add a note on its working.
13. First aid kit.
14. Uses of radioactive isotopes in diagnostic field.
15. Define and classify SI units.
16. Beer Lamberts law and its limitations.
17. Difference between stock and working solution.
18. ABG analysis.
19. Define a) Equivalent weight b) Molecular weight c) Valency
20. What are essential amino acids? Name them.
21. Responsibilities of health care personnel.
22. Working of Hot Air Oven.

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

23. Indicators. Give one example.
24. Cyclomixer.
25. Care of pH meter.
26. Plastic ware in laboratory.
27. Burettes.
28. Bicarbonate buffer.
29. Difference between starch and glycogen.

*****

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 29-Nov-2023

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. Steps in tissue processing
2. Bleeding time
3. Erythrocyte Sedimentation Rate.
4. Anticoagulants used in hematology
5. Rotatory microtome
6. H and E staining
7. Examination of CSF fluid
8. Blood transfusion reactions
9. Microscopic examination of urine
10. Describe the procedure for receiving the specimens and processing.

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

11. Methods of PCV examination
12. Care of microscope
13. Urinary casts
14. Tests for protein in urine
15. Honing and stropping
16. Benedict's test
17. Mounting media
18. Rhesus blood group system
19. Describe the structure and function of RBC.
20. Bluing
21. Activated partial thromboplastin time
22. Describe cleaning of glassware.

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

23. Cob web coagulum
24. Tests for occult blood in stools
25. Name the SI units
26. Name any two preservatives used in urine.
27. Name two clearing agents used in histopathology.
28. Mention the tests for ketone bodies.
29. Mention two concentration methods for stool examination.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - 27-Nov-2023

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. Give a detailed account of chemistry, source, RDA, functions and deficiency disorders of Vitamin C.
2. Describe the reactions of glycolysis indicating the enzymes. Add a note on net yield of ATP under aerobic and anaerobic glycolysis.
   OR
   Describe the reactions of Urea cycle.

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

3. What is HMP Shunt? Give its significance.
4. Monosaccharides.
5. Describe the digestion and absorption of lipids.
   OR
   Essential amino acids.
6. Calcium sources, RDA, functions and deficiency manifestations.
7. Hyperglycemic hormones.
8. Clearance tests to assess glomerular functions.
9. Ketone bodies and their clinical significance.
10. Define and classify lipids. Add a note on its functions.
    OR
    BMR.
11. What are solutions? Classify them with suitable examples.
12. Define and classify enzymes with examples.

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

13. Balanced diet.
14. Different types of RNA with their functions.
15. Normal serum levels of a) Serum Urea b) Blood Glucose c) Serum Creatinine.
    OR
    Ocular manifestations of Vitamin A deficiency.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - 29-Nov-2023

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 normal hemostasis. Add a note on anti-coagulants.
2. Describe urine examination in detail.
   OR
   Define thrombosis. Describe the mechanism of formation and fate of thrombus.

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

3. Processing of body fluids.
4. Sputum examination.
5. Packed cell volume.
   OR
   Blood compatibility testing.
6. Microscopic examination of feces.
7. Pathologic calcification.
8. Factors affecting wound healing.
9. Causes and outcome of acute inflammation.
10. Types of edema.
    OR
    Modes of carcinogenesis.
11. Define bleeding time. Explain any one method.
12. Types of cell injury.

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

13. Name three preservatives used for urine.
14. Principle of Sahli's method of haemoglobin estimation.
15. Stages of ESR (Erythrocyte Sedimentation Rate).
    OR
    Define Prothrombin Time (PT).
16. What is Rh system of blood grouping?