Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – APRIL-2019

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 knee joint under following headings.
   a)Ligaments
   b)Actions
2. Histology of Ovary
3. Portocaval anastomosis
4. Name the lobes of cerebrum and add a note on blood supply of brain.
5. Interior of right atrium
6. Middle ear
7. Soft palate
8. Scalp – layers, nerve supply and blood supply
9. Urinary bladder
10. Thoracic duct

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

11. Hilum of the left lung
12. Draw a neat labelled diagram of typical spinal nerve
13. Flexor retinaculum – attachments and structures passing deep to it
14. Deltoid muscle
15. Classify joints. Describe the synovial joint.
16. Medial cubital vein
17. Rotator cuff muscles
18. Superior mediastinum – boundaries and contents
19. Microsctructure of kidney
20. Abdominal aorta – branches
21. Parts of stomach
22. Name the meninges

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

23. Name the carpal bones.
24. Name the branches of the external carotid arteries.
25. Name the paranasal air sinuses.
26. Name the muscles of mastication.
27. Mention the tributaries of coronary sinus.
28. Name any four cartilages of larynx.
29. Parts of brainstem

Rajiv Gandhi University of Health Sciences, Karnataka

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I Year B.Sc. Allied Health Sciences Degree Examination – APRIL-2019

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

PHYSIOLOGY

(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

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Draw neat, labeled diagrams wherever necessary

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

1. Define synapse and explain synaptic transmission.
2. Oxygen transport
3. Rh incompatibility
4. GFR
5. Define Shock. Discuss the types of shock.
6. Functions of middle ear
7. Excitation – contraction coupling in skeletal muscle
8. Actions of pancreatic juice
9. Actions of thyroid hormones
10. Ovarian changes during menstrual cycle

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

11. Trace the visual pathway
12. List the actions of growth hormone.
13. Junctional tissues of heart
14. Functions of plasma proteins
15. Surfactant
16. List the actions of saliva
17. Cystometrogram
18. Functions of hypothalamus
19. Enumerate the basis of classification of nerve fibers
20. Mention the actions of oestrogen.
21. Classify ABO and Rh system.
22. Enumerate the functions of skin.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – APRIL-2019

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 (ATTEMPT ANY EIGHT) **8 x 5 = 40 Marks**

1. Water distillation apparatus
2. Draw the diagram of standard flask and write its uses.
3. Principle, uses and care of colorimeter
4. Different types of pipettes and their uses
5. Laboratory safety measures
6. Hot air oven
7. Define and classify SI units
8. Principle and components of pH meter
9. Henderson – Hasselbalch equation
10. Define carbohydrates. Classify carbohydrates with example. Add a note on functions.

SHORT ANSWERS (ATTEMPT ANY TEN) **10 x 3 = 30 Marks**

11. Define acids and bases with one example each
12. Reflex condenser
13. Standard solution
14. Acid-base indicators
15. Different types of tubes used in a laboratory
16. Define Bunsen burner. Write the uses.
17. Water bath - uses
18. Preparation of 1N NaOH
19. Water deionisers
20. Significance of borosilicate glass
21. Centrifuges – types and uses
22. Cleaning of glass wares

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – APRIL-2019

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 method for Erythrocyte sedimentation rate (ESR) estimation. What is the normal ESR?
2. Red cell indices
3. CSF analysis
4. Classification of fixatives
5. Decalcification
6. Microscopic examination of urine
7. Describe the procedure for examination of sperm count and sperm morphology.
8. Describe the technique of paraffin embedding. Name other embedding media.
9. Normal erythropoiesis
10. Decalcification end-point tests

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

11. Care of microscope
12. Care of laboratory glassware
13. Methods for blood grouping
14. Urinary casts
15. Describe the structure and function of Monocyte.
16. Uses of Buffy coat
17. Benedict's test – procedure and principle
18. What is the normal specific gravity of urine? Give two causes for reduced specific gravity of urine.
19. Instruments used in grossing
20. Characteristics of ideal fixative
21. Procedure of Leishmann's staining
22. Minor crossmatching

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – APRIL-2019

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. Bacterial spore
2. Mycobacterium leprae – disease caused
3. Syphilis
4. Clinical manifestation of Entamoeba histolytica
5. Universal Immunization schedule
6. Bacterial growth curve
7. Disease caused by Wuchereria bancrofti
8. Candidiasis
9. Cultivation of viruses
10. Hot air oven

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

11. ASO test
12. KOH mount
13. Enriched media
14. Quellung's test
15. Serological markers of Hepatitis B virus
16. Laboratory diagnosis of Leptospirosis
17. Principle of Gram staining
18. Filtration
19. Mention three differences between active immunity and passive immunity.
20. Viral capsid
21. Aspergillosis
22. Name three live attenuated viral vaccines.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – SEP-2019

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

Basic Anatomy (Including Histology)

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology
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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. What are the movements of shoulder joint? Mention the muscles causing it.
2. Describe the prostate gland under the following headings.
   a)Coverings
   b)Lobes
   c)Blood supply
3. Right atrium
4. Enumerate the boundaries and contents of cubital fossa.
5. Microstructure of pituitary gland
6. Inguinal canal – boundaries and contents
7. Describe the uterus under the following headings.
   a)Supports of the uterus
   b)Blood supply
8. Describe the structure of stomach.
9. External carotid artery - branches
10. Thyroid gland – Relations and blood supply

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

11. Carpal tunnel syndrome
12. Spermatic cord – covering and contents
13. Femoral sheath
14. Muscles of tongue
15. Gluteus maximus muscle – attachments and actions
16. Anal canal
17. Bronchopulmonary segments of the lung
18. Spleen – Visceral relations
19. Great saphenous vein
20. Transpyloric plane
21. Histology of lymph node

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – OCT-2019

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

PHYSIOLOGY

(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. Explain the intrinsic mechanism of coagulation. Write the mechanism of action of any two Anticoagulants.
2. Briefly describe the property of refractory period in a cardiac muscle.
3. Enumerate the neuroglial cells and mention any two functions of each.
4. Functions of stomach
5. Write a note on transfusion reaction.
6. Chemical regulation of respiration.
7. Explain the micturition reflex.
8. Enumerate the functions of Aldosterone.
9. Trace the pyramidal pathway
10. Explain the counter current mechanism.

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

11. Define EEG. Name the waves of EEG.
12. Draw spirogram and label it.
13. Name the components of the conducting system of the heart.
14. Trace the olfactory pathway
15. Differentiate between isometric contraction and isotonic contraction
16. Fibrinolysis
17. Functions of Surfactant
18. Enumerate the functions of thalamus.
19. Organ of corti
20. What is Eosinophilia? List the causes.
21. Define menopause. Write any two features.
22. Define synapse and mention types of synapse.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – OCT-2019

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

BIOCHEMISTRY

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(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. Classify lipids with suitable examples.
2. Define Beer-Lambert law. Write its limitations.
3. What is percent solution? How to prepare 0.9% NaCI solution? Explain how to prepare 0.1% NaCI solution from 0.9% NaCI stock solution prepared?
4. Care and cleaning of glass wares
5. Responsibilities of a health care personnel
6. Explain different types of dilution used in laboratory.
7. Principle and working of centrifuge
8. Enumerate the safety measures to be taken in a clinical laboratory for chemical safety.
9. Explain principle, instrumentation and uses of pH meter.
10. Analytical balance and its uses

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

11. Management of biomedical waste
12. What are hygroscopic compounds? Give two examples.
13. Significance of Borosilicate glass
14. Types, use and maintenance of a) Beakers b) Petri dishes
15. Draw a labelled diagram of water distillation apparatus
16. Define the SI units of concentration and length.
17. Explain Bicarbonate buffer system.
18. Define isotopes. Give two applications of Radio isotopes.
19. Classify amino acids based on nutritional requirement with example.
20. How to prepare 1M Sulphuric acid solution?
21. What are polysaccharides? Give two examples with their functions.
22. What are nucleotides? Mention their functions.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – OCT-2019

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

PATHOLOGY

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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. CSF analysis
2. Discuss the various methods of urine collection.
3. Decalcification
4. Sputum examination
5. Freezing microtome
6. Red blood cell indices
7. Name the steps involved in tissue processing. Write a note on dehydration.
8. Packed cell volume
9. Quality control in Hematology laboratory
10. Embedding

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

11. Prothrombin time
12. Tests for glucose in urine
13. Stages of erythrocyte sedimentation rate
14. Bence-Jones Protein
15. Sahli's method of haemoglobin estimation
16. Mention the methods for blood grouping.
17. Urinary casts
18. What is the normal total leucocyte count and mention the composition of WBC diluting fluid?
19. Write a note on Biomedical waste management.
20. Mention three causes of Hematuria.
21. Describe an ideal peripheral blood smear.
22. Tests for blood in urine

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – OCT-2019

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

MICROBIOLOGY

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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. Hot air oven
2. Acid fast staining
3. Bacterial growth curve
4. Biomedical waste management
5. Bacterial cell wall
6. Laboratory diagnosis of syphilis
7. Widal test
8. Clinical manifestation of Human Immunodeficiency Virus (HIV)
9. Vaccines
10. Candidiasis

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

11. Coagulase test
12. Universal Immunization schedule
13. Phase contrast microscope
14. Kirby Bauer Disc diffusion method
15. Selective media
16. Castaneda’s biphasic medium
17. Name three infections caused by Streptococcus pyogenes.
18. Tuberculin test
19. Pasteurization
20. Draw neat labeled diagrams of egg of Ascaris lumbricoides
21. Cryptococcosis
22. List three media used in cultivation of fungi.