Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. (Allied Health Sciences) Degree Examination - MAR/APR 2017

Time: Three Hours | Max. Marks: 80 Marks

ANATOMY
(Including Histology)- RS-2

(MLT, O.T. Technology, Cardiac Care Technology, Perfusion Technology, Neuro Sciences Technology, Renal Dialysis Technology, Respiratory Care Technology, Medical Imaging Technology & Radiotherapy Technology)

Q.P. CODE: 1226

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

LONG ESSAYS (Answer any Two) 2 x 10 = 20 Marks

1. Classification of bone and microscopic picture of compact bone
2. Name the parts of female reproductive organs and describe uterus in detail
3. Classify central nerovovs system. Explain in detail the parts of a neuron

SHORT ESSAYS (Answer any Six) 6 x 5 = 30 Marks

4. Urinary bladder
5. Duodenum
6. Circle of willis
7. Types of muscle
8. Great saphenous vein
9. Superficial palmar arch
10. Visceral surface of liver
11. Blood supply to the heart

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

12. Name the bones of lower limb
13. Name the air sinuses
14. Basal ganglia
15. Superficial palmar arch
16. Mc Burney's point
17. Name the extra hepatic billiary apparatus
18. Name the structures in the porta hepatis
19. Name the structures in the hilum of right lung
20. Difference between ligament & tendon
21. Name the branches of external carotid artery
22. ULNA
23. Orbicularis oculi

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. (Allied Health Sciences) Degree Examination – APRIL 2017

Time: Three Hours Max. Marks: 80 Marks

PHYSIOLOGY – RS-2

(MLT, O.T. Technology, Cardiac Care Technology, Perfusion Technology, Neuro Sciences Technology, Renal Dialysis Technology, Respiratory Care Technology, Medical Imaging Technology & Radiotherapy Technology)

Q.P. CODE: 1227

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

LONG ESSAYS (Answer any Two) 2 x 10 = 20 Marks

1. Trace the pathway for pain sensation. Explain the gate mechanism of pain.
2. What is Landsteiner's law? Explain its applications in the ABO and Rh system. List the importance of blood grouping.
3. Explain briefly the mechanics of ventilation.

SHORT ESSAYS (Answer any Six) 6 x 5 = 30 Marks

4. Explain the mechanism of peristalsis.
5. What is pulmonary surfactant? Enumerate the functions of surfactant.
6. Explain the functions of cortisol
7. Describe the source and functions of testosterone.
8. Explain the factors affecting erythropoiesis.
9. Define cardiac cycle. Describe the phases of ventricular diastole.
10. Enumerate the functions and regulation of secretion of pancreatic juice.
11. Define Jaundice. Briefly explain the three types of Jaundice.

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

12. List the functions of bile salts.
13. Define biot's breating.
14. Define ESR. State it significance and factors affecting it.
15. Define Cyanosis. List the areas where cyanosis can be observed.
16. Draw and mention the causes for ECG waves.
17. Define Ovulation. Give its hormonal basis.
18. What are anti-coagulants. List any four anti coagulants.
19. Define arteficial respiration. List any two methods.
20. Define Anemia. Give the normal Haemoglobin concentration of the blood.
21. Draw a neat diagram of the organ of corti.
22. Define arterial blood pressure and give its normal value.
23. Define myopia. How is it corrected.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. (Allied Health Sciences) Degree Examination - APRIL 2017

Time: Three Hours | Max. Marks: 80 Marks

BIOCHEMISTRY (RS-2)

(MLT, O.T. Technology, Cardiac Care Technology, Perfusion Technology, Neuro Sciences Technology, Renal Dialysis Technology, Respiratory Care Technology, Anesthesia Technology, Medical Imaging Technology & Radiotherapy Technology)

Q.P. CODE: 1228

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

LONG ESSAY (Any Two) 2 x 10 = 20 Marks

1. What are the major mechanisms for the regulation of Blood pH? Explain two of them in detail.
2. Classify vitamins with examples and discuss the sources, functions, deficiency manifestations of vitamin A.
3. Discuss the principle and parts of a Colorimeter with diagram. Write the uses.

SHORT ESSAY (Any Six) 6 x 5 = 30 Marks

4. Pre analytical variables
5. Abnormal constituents of Urine and the tests to identify them
6. Nutritional importance of proteins in the diet
7. Anticoagulants in blood collection
8. Different types of pipettes and its uses
9. Preparation of 2M sodium hydroxide and 1N sodium chloride solution
10. Metabolic acidosis and its compensation
11. Different types of indicators and its uses

SHORT ANWERS (Any Ten) 10 x 3 = 30 Marks

12. Nitrogen Balance
13. Fibers in the diet
14. Uses of Water bath
15. Cleaning of stained glass wares
16. Urinometer
17. Beer’s law and Lambert’s law
18. Urine preservatives
19. Dalton’s theory
20. Precautions while using centrifuge
21. S I units
22. Glucometer
23. Beri-beri

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. (Allied Health Sciences) Degree Examination - APRIL 2017

Time: Three Hours | Max. Marks: 80 Marks

BIOCHEMISTRY (RS-2)

(MLT, O.T. Technology, Cardiac Care Technology, Perfusion Technology, Neuro Sciences Technology, Renal Dialysis Technology, Respiratory Care Technology, Anesthesia Technology, Medical Imaging Technology & Radiotherapy Technology)

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SHORT ANWERS (Any Ten) 10 x 3 = 30 Marks

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13. Fibers in the diet
14. Uses of Water bath
15. Cleaning of stained glass wares
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21. S I units
22. Glucometer
23. Beri-beri

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. (Allied Health Sciences) Degree Examination - APRIL 2017

Time: Three Hours | Max. Marks: 80 Marks

PATHOLOGY (RS-2)

(Clinical Pathology & Heamatology & Blood Banking)

(MLT, O.T. Technology, Cardiac Care Technology, Perfusion Technology, Neuro Sciences Technology, Renal Dialysis Technology, Respiratory Care Technology, Medical Imaging Technology & Radiotherapy Technology)

Q.P. CODE: 1229

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

LONG ESSAY (Any Two) 2 x 10 = 20 Marks

1. What is the principle of decalcification? List the various methods of decalcification. Write a note on the tests used to detect the end-point of decalcification.
2. List the methods of estimation of haemoglobin. Describe the Sahli's method of haemoglobin estimation including principle, procedure and interpretation.
3. Define and classify crossmatching. Explain in detail the procedure, interpretation and uses of crossmatching.

SHORT ESSAY (Any Six) 6 x 5 = 30 Marks

4. Outline the steps of routine processing of tissue in a Histopathology lab
5. List the various fixatives used and mention their indications
6. Use and care of microscope
7. Lab safety guidelines
8. Physical examination of urine
9. Semen analysis
10. CSF examination in Pyogenic meningitis
11. Anticoagulants used in the lab

SHORT ANWERS (Any Ten) 10 x 3 = 30 Marks

12. Mention normal total WBC count and give 2 causes for leucocytosis
13. List 3 haemoparasites
14. What are the methods of blood grouping?
15. Crystals in urine
16. Stool findings in amoebic dysentery
17. Red cell indices
18. Blueing
19. Mounting media
20. Stages of normal erythropoiesis
21. List 3 precautions for Biomedical waste disposal
22. What are Ketone bodies? Name the test used to detect ketone bodies in urine
23. List 3 clearing agents

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. (Allied Health Sciences) Degree Examination - April 2017

Time: Three Hours | Max. Marks: 80 Marks

MICROBIOLOGY (RS-2)

(MLT, O.T. Technology, Cardiac Care Technology, Perfusion Technology, Neuro Sciences Technology, Renal Dialysis Technology, Respiratory Care Technology, Medical Imaging Technology & Radiotherapy Technology)

Q.P. CODE: 1230

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

LONG ESSAY (Any Two) 2 x 10 = 20 Marks

1. Discuss methods of cultivation of viruses.
2. Describe laboratory diagnosis of pulmonary tuberculosis.
3. Describe the morphology, life cycle and lab diagnosis of Echinococcus granulosum.

SHORT ESSAY (Any Six) 6 x 5 = 30 Marks

4. Bacterial spore.
5. Fluorescent microscope.
6. Gram Stain.
7. Bacterial cell wall.
8. Bacterial growth curve.
9. Pasteurization
10. Laboratory diagnosis of dermatophytes.
11. Laboratory diagnosis of rabies.

SHORT ANWERS (Any Ten) 10 x 3 = 30 Marks

12. Essential growth factors.
13. Capnophilic bacteria.
14. Sterilization by inspissator.
15. Aldehydes as disinfectants.
16. Selective media.
17. Name any three causative agents of Nosocomial infections.
18. Diagram of egg of Ankylostoma duodenale.
19. Diagram of LPCB mount of Mucor.
20. Catalase test.
21. CRP
22. List the types of diarrhoeagenic Escherichia coli.
23. List three species of Shigella.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – SEP-2017

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 necessaryry

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

1. Define Sterilization. Discuss in detail about sterilization by moist heal above 100° C.
2. Laboratory diagnosis of Ancylostoma duodenale infection
3. Laboratory diagnosis of Cholera
4. Mechanism of Innate immunity
5. Bacterial Flagella
6. Write a note on disease caused by Rabies Virus.
7. Explain in detail about different methods of transmission of infection.
8. Write a note on Antibiotic sensitivity test.
9. Write a note on Dermatophytosis
10. Anaerobic culture methods

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

11. Antistreptolysin O Test
12. Enrichment media
13. Streak culture method
14. Differences between Active immunity and passive immunity (Any three)
15. Serological Markers of Hepatitis B virus
16. KOH mount preparation
17. List the opportunistic infections in AIDS (any three).
18. Morphology of E. histolytica
19. VDRL Test
20. Disease produced by Staphylococcus aureus (any three).
21. Name any 3 contributions of Louis Pasteur
22. Draw a neat labeled diagram HIV

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – SEP-2017

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. Physical examination of urine
2. Decalcification
3. Describe an ideal peripheral blood smear.
4. Maintenance of records
5. Biomedical waste management
6. Packed cell volume
7. H & E stain
8. Mordants
9. Analysis of cerebrospinal fluid
10. Progressive and regressive staining

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

11. Classification of fixatives
12. Stages of ESR
13. Mention three clearing agents.
14. Mention normal Reticulocyte count and two stains used for Reticulocyte staining.
15. Method of doing absolute eosinophil count and give normal values.
16. ABO blood group system
17. Coagulation cascade
18. Three types of microtomes
19. Test for blood in urine
20. Steps in tissue processing
21. Mention the two methods used to measure hemoglobin and write principle of one of them.
22. Mention three red cell indices.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – SEP-2017

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 principle and working of water distillation apparatus with diagram.
2. Write about the general laboratory safety measures while working in a laboratory.
3. Write the principle and working of a pH meter.
4. Write the types of weighing balances and add a note on double pan balance.
5. Define Beer Lambert's law and write its limitations.
6. Define and classify lipids. Add a note on its functions.
7. Define normality. Explain the preparation of a) 0.1N NaoH b) 0.1N HCI from 1N HCI.
8. What is the pH of blood? Name the blood the buffers and explain bicarbonate buffer system for pH regulation.
9. Classify carbohydrates with example and write the functions.
10. Hot air oven – principle, components, uses, care and maintenance

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

11. Significance of borosilicate glass
12. Deep freezers and cold box
13. Define SI units with example.
14. Define essential fatty acids with example.
15. What are solutions? Classify them with suitable examples.
16. Define salts and classify them.
17. Biomedical waste management
18. Applications of radioactive isotopes
19. Components of first aid kit
20. Add a note on biological hazards.
21. Types of pipettes and their uses
22. Write the Principle of centrifugation and write the types of centrifuges.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – SEP 2017

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. Describe the functions of pancreatic juice.
2. Junctional tissue of the heart
3. Referred pain
4. Trace the visual pathway.
5. Micturition reflex
6. Function of middle ear
7. Milk ejection reflex
8. Explain the stages of Erythropoiesis.
9. Stages of deglutition
10. Rennin-angiotensin mechanism

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

11. Brief note on surfactant
12. Functions of blood
13. Stages of spermatogenesis
14. Describe the phases of gastric secretion.
15. Functions of plasma protein
16. Plot the graph showing the pressure changes during ventilation.
17. Movements of small intestine
18. Functions of kidney
19. Describe any two types of hypoxia.
20. Explain the electrocardiogram (ECG) with waves and intervals.
21. Functions of saliva
22. Errors of refraction

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – SEP-2017

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 Thyroid gland under the following headings – parts, relations and blood supply.
2. Describe the boundaries and contents of femoral triangle.
3. Describe the Pancreas under the following headings – parts, external features and blood supply
4. Describe the Femoral artery under the following headings – origin, termination, course and branches
5. Describe the Parotid gland under the following headings = surfaces, borders, relations and nerve supply.
6. Arch of Aorta
7. Classify Dural venous sinuses and add a note on cavernous sinuses.
8. Describe the gross anatomy of Ovary.
9. Describe nerve supply of Tongue.
10. Mediastinal surface of right lung and left lung with diagram

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

11. Histology of thin skin
12. Implantation
13. Greater omentum
14. Salient features of cervical vertebrae
15. Histology of transverse section of Skeletal muscle
16. Histology of Elastic cartilage
17. Pseudostratified epithelium
18. Trigone of bladder
19. Contents of Middle ear cavity
20. Blood supply of stomach
21. Facial artery and its branches
22. Ligaments of the Knee joint