Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - May 2016

Time: Three Hours Max. Marks: 80 Marks

Basic Anatomy including Histology

(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: 3151

(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. Describe the Right Atrium of Heart.
2. Describe the borders surfaces and posterior relations of left Kidney.
3. Name the parts of Large Intestine. Describe Vermiform Appendix.
4. Describe the Arterial supply of Stomach. Name the structures forming Stomach bed.
5. Describe the medial surface of Right Lung.
6. Describe the parts, location and microscopic anatomy of Pancreas.
7. Classify the Epithelium with examples for Simple Epithelia.
8. Name the extrinsic muscles of the Eyeball. Give their actions.
9. Describe the parts and blood supply of Thyroid gland.
10. Describe the location and blood supply of Duodenum.

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

11. Trachea
12. Histology of Hyaline cartilage
13. Name the bone cells.
14. Corpus Callosum
15. Falx cerebri
16. Fertilization
17. Vocal cords
18. Histology of Submandibular gland
19. Brachial plexus
20. Hilum of spleen
21. Histology of large artery
22. Coeliac trunk

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

23. Name any two branches of Femoral Artery.
24. Name any two muscles of Soft Palate.
25. Name the parts of Uterus.
26. Name the Hamstring muscles.
27. Name the ear ossicles.
28. Name the parts of Gall bladder.
29. Name the branches of Arch of Aorta.

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PHYSIOLOGY

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology
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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 (ATTEMPT ANY EIGHT) 8 x 5 = 40 Marks

1. Describe body temperature regulation.
2. Give three differences between hepatic bile and gall bladder bile and give an account for these differences.
3. How do you classify immune defence system? Describe each of it giving one example.
4. What is Erythroblastosis foetalis? Explain how it is causes. Describe the physiological basis of its management.
5. Define isotonic and isometric contraction. Give examples
6. Draw a neat diagram of Cortico spinal tract and label it. Enumerate its functions.
7. Draw a diagram to show phases of ventricular action potential.
8. Describe the role of vitamin D in calcium homeostasis.
9. Briefly describe the functions of proximal convoluted tubules of the kidney.
10. Write briefly the mechanics of ventilation.

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

11. What are the basic functions of the inner and outer hair cells in the organ of Corti?
12. Draw and label a diagram of ECG recording in lead II. Give the normal value of the P-R interval.
13. Describe the role of erythropoietin and vitamin B_{12} in the RBC production.
14. List the types of transport across cell membrane and explain active transport with example.
15. Write any four functions of Kidney.
16. What is purpura? Give any two causes of purpura.
17. Name the hormones that influence urine formation and where do they act?
18. Draw a labeled diagram of the pathway for taste.
19. Name any two hormones essential for normal lactation. Specify their roles in lactation.
20. Draw a diagram to show Bohr's effect.
21. Functions of saliva
22. Draw and label the visual pathway.

TO THE POINT ANSWERS (ATTEMPT ANY FIVE) 5 x 2 = 10 Marks

23. Name the two theories for referred pain.
24. Fibrinolysis
25. What is surfactant?
26. Landsteiner's law
27. What is Marey's law?
28. Define blood pressure. Give its normal value.
29. Structure of a myelinated neuron

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BIOCHEMISTRY

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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. Different types of pipettes and their uses
2. Laboratory balances – types, uses and care
3. Care and cleaning of glass wares in the laboratory
4. Principle and applications of colorimetry
5. What is percent solution? How to prepare 0.9% NaCl? Explain how to prepare 0.1% NaCl from 0.9% NaCl stock solution prepared.
6. Principle and components of pH meter
7. Define and classify SI units with examples.
8. Laboratory safety measures
9. Define normality. Explain preparation of 0.1N NaOH.
10. Write Henderson-Hasselbalch equation and its applications.

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

11. Write uses of (i) Water bath (ii) Oven (iii) Incubator.
12. What are buffers? Give two examples.
13. Define (a) Test tube (b) Centrifuge tube (c) Burette.
14. What are hygroscopic substances? Give two examples.
15. Principle of centrifugation technique
16. Name any three glassware used in laboratory with uses.
17. Precautionary measures to be taken while handling chemical balance
18. Flasks in the laboratory
19. Care and maintenance of (i) pH meter (ii) Refrigerator (iii) Centrifuge
20. What is standard solution? How to prepare 1% glucose standard solution?
21. Define buffers. Add a note on fluid buffers
22. Convert 1N NaOH into percent solution.

TO THE POINT ANSWERS (ATTEMPT ANY FIVE) 5 x 2 = 10 Marks

23. Define acids and bases with one example each.
24. Write any two types of racks used in laboratory with their uses.
25. Write types of cuvettes and their uses.
26. Define indicators with example.
27. Petri dish
28. Uses of: (a) Reflux condenser (b) Water deionisers
29. Define: (a) Valency (b) Molecular weight

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – MAY 2016

Time: Three Hours Max. Marks: 80 Marks

PATHOLOGY

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology
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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. Mention the steps in processing for routine paraffin sections.
2. Mention the methods used for estimation of ESR, normal values and the factors influencing it.
3. Anticoagulants used in the laboratory
4. Mention the different methods used to measure hemoglobin and describe Sahli's method.
5. CSF analysis
6. Mention three anticoagulants used in the laboratory with their mode of action.
7. What is the principle of Romanowsky stains and give four examples?
8. Bleeding time
9. Mention methods of doing PCV with normal values.
10. Haematoxylin stain

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

11. Decalcification
12. Honing and stropping
13. Care of laboratory glassware
14. Use of computers in pathology
15. What is the normal absolute eosinophil count and give two causes for eosinophilia?
16. Cross-matching of blood
17. Mention three mountants.
18. Crystals in urine
19. Clearing agents
20. Tests for glucose in urine
21. Mention normal differential leucocyte count.
22. Describe an ideal fixative.

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

23. Mention two types of microtomes.
24. Mention any two embedding media.
25. Mention two cysts seen in the stool.
26. Name constituents of Double oxalate
27. Mention two transfusion transmitted infections.
28. MCV
29. Steps in cleaning microscope

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I Year B.Sc. Allied Health Sciences Degree Examination – MAY 2016

Time: Three Hours Max. Marks: 80 Marks

MICROBIOLOGY

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology
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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. Gram staining
2. Autoclave
3. Transport media
4. Electron microscope
5. Bacterial growth curve
6. Laboratory diagnosis of Gonorrhoea
7. Give a brief account of Laboratory diagnosis of Typhoid fever
8. Cryptococcosis
9. Laboratory diagnosis of parasitic infections
10. Rabies

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

11. Bacterial flagella
12. Tyndallisation
13. Kirby – Bauer disc diffusion method
14. Name three chemical disinfectants.
15. Name any three causative agents of nosocomial infection.
16. Mantoux test
17. RPR test
18. KOH mount
19. Hepatitis A virus
20. Aspergillosis
21. Difference between fertilized egg and unfertilized egg of Ascaris lumbricoides
22. Name any three Diarrheagenic E.coli.

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

23. Live attenuated vaccines
24. Name any two selective media for Salmonella typhi.
25. Name any two gram-negative bacilli.
26. VDRL
27. Name any two DNA viruses.
28. Name four species of Plasmodium.
29. Mucormycosis

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – SEPTEMBER 2015

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. Pancreas – parts, relations of head, blood supply and nerve supply
2. Spleen – position, ligaments, blood supply and applied aspect
3. Histology of trachea
4. Lateral wall of nose
5. Right atrium – interior and openings
6. Meninges of brain
7. Urinary bladder – position, ligaments, blood supply and applied aspect
8. Fertilization
9. Porto-caval anastomosis
10. Classification of synovial joints with examples

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

11. Oogenesis
12. Typical inter-costal nerve
13. Histology of Submandibular salivary gland
14. Sulci and gyri on the medial surface of cerebrum
15. Interior of anal canal
16. Cavity of larynx
17. Name the tracts of spinal cord.
18. Fallopian tube
19. Structure of neuron
20. Gall bladder
21. Transitional epithelium
22. Thyroid gland – blood supply