# Rajiv Gandhi University of Health Sciences, Karnataka

I Year Allied Sciences Degree Examination – September 2014

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

## ANATOMY (RS-2)

## 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. Name the parts of the Urinary system. Describe anatomy of Kidney in detail.
2. Name the endocrine glands in the body. Describe Thyroid gland in detail.
3. Name the parts of central nervous system. Describe sulci and gyri of Cerebrum.

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

4. Interior of the anal canal
5. Formation, termination & tributaries of Portal vein
6. Mediastinal surfaces of left lung.
7. Pericardium
8. Uterus
9. Hip joint
10. Spermatogenesis
11. Sternocleidomastoid

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

12. Draw a neat, labelled diagram of structure of neuron.
13. Name the bones forming pelvis.
14. Difference between small intestine & large intestine
15. Microstructure of thick skin
16. Contents of spermatic cord
17. Name the veins opening into the right atrium of the heart.
18. Name the tunics covering the eyeball.
19. Name the carpal bones
20. Name any three branches of brachial plexus.
21. Name the structures passing through foramen magnum.
22. Name three types of cartilage with examples.
23. Name the muscles of mastication.

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## 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. Describe the steps in the synthesis of Thyroid hormones. Explain the regulation of its synthesis. Name the clinical condition due to its decreased secretion in child hood.
2. Describe both the touch pathways from its origin to its termination with the help of a line diagram. What type of touch information does each conduct?
3. Describe the stages of Erythropoiesis with help of a diagram. Describe the regulation of erythropoiesis.

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

4. Describe neuromuscular junction.
5. Write the functions of saliva.
6. Draw and label a diagram of Juxta Glomerular Apparatus. Describe its role in renal functions.
7. Describe regulation of blood pressure.
8. List and describe the different modes of carbon dioxide transport in the body. Explain Haldane's effect with help of a diagram.
9. What is venous return? What factors influence venous return? Explain in detail any one factor that aids venous return.
10. Explain the consequences of mismatched blood transfusion.
11. What are chylomicrons? Where are they produced? Describe the process of fat absorption in intestine.

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

12. Anticoagulants used in vivo and vitro.
13. List types of cells in the stomach. Mention the secretion and function of each.
14. Tests for ovulation
15. Chvostek's and Trousseau's Signs
16. Functions of testosterone
17. Define polycythemia. What are the types?
18. List the features of acromegaly.
19. List the actions of bile salts.
20. Name the contractile proteins.
21. Timed vital capacity
22. Draw a diagram of the sarcotubular system in the skeletal muscle.
23. Abnormal constituents of urine

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**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. Define (a) Gram Atomic Weight, (b) Gram Equivalent Weight, (c) Molarity, (d) Molality and (e) Normality. Explain how to prepare 0.1 N $H_2SO_4$. (Molecular Weight of $H_2SO_4$ – 98; Specific Gravity of $H_2SO_4$ - 1.9; Percentage Purity of $H_2SO_4$ – 98)
2. What is Beer Lambert's Law? Enumerate any two limitations of Beer Lambert's Law. Explain the instrumentation of Spectrophotometer with the help of a neat labelled diagram. Enumerate any four differences between a Colorimeter and a Spectrophotometer.
3. Write the sources, RDA, functions, chemistry and deficiency manifestations of Vitamin A.

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

4. Explain briefly the use, care and maintenance of Laboratory Glassware.
5. Explain briefly the use, care and maintenance of Laboratory Balance.
6. Explain the Dalton's theory of Atomic Structure. What are the drawbacks of Dalton's theory?
7. What is (a) Stock Standard (b) Working Standard (c) Percent Solution?
8. What are the uses of Reflux Condenser? Explain the care and maintenance of Reflux Condenser.
9. What are the different types of Urine Collection? Enumerate any four Urine Preservatives.
10. Define BMR. Enumerate any four factors affecting BMR. What is the normal value of BMR?
11. Enumerate different types of pipettes and write its uses.

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

12. What is a Dessicator? What are its uses?
13. Enumerate any three parameters measured in Arterial Blood Gas Analyser.
14. Write Henderson Hasselbalch Equation.
15. What are the different types of Flasks used in laboratory
16. Enumerate any three SI Units with examples.
17. Enumerate deficiency manifestations of (a) Thiamine (b) Niacin (c) Vitamin C.
18. What is the Chemical name of (a) Vitamin K (b) Vitamin B12 (c) Vitamin D?
19. Draw a neat labelled diagram of Normal Serum Protein Electrophoresis pattern.
20. What is (a) Metabolic Acidosis (b) Metabolic Alkalosis (c) Respiratory Alkalosis?
21. What is Accuracy? How do you measure Accuracy in a Clinical Lab?
22. What is Precision? How do you measure Precision in a Clinical Lab?
23. Enumerate any three Nutritional importances of Lipids.

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## 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. Define fixation and classify fixatives? Add a note on preparation and uses of routine formalin fixative.
2. Explain in detail microscopic examination of feces.
3. Describe CSF analysis.

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

4. Embedding techniques
5. Tests to detect completion of decalcification
6. Physical examination of urine
7. Azoospermia
8. Bence-Jones protein
9. Name the various anticoagulants used in hematology.
10. Describe procedure and interpretation of crossmatching.
11. Normal constituents of blood and their functions

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

12. How do your prepare eosin stain?
13. Name the important parts of microscope.
14. Name the microtome knives.
15. Causes of lymphocytic pleural effusion
16. Blood grouping and Rh typing
17. What is PCV? Name the instrument and anticoagulant used to detect PCV.
18. Casts in urine
19. Indication of semen analysis
20. Name two micro-anatomical fixatives.
21. Anuria.
22. Methods of collection of blood samples in hematology
23. Name the uses of formaldehyde.

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## 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. Define and classify Sterilization. Discuss about autoclave.
2. Describe the Morphology of Vibrio cholerae and Laboratory diagnosis of cholera
3. Discuss the laboratory diagnosis of typhoid fever.

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

4. Enriched media
5. Mantoux test
6. VDRL test
7. Laboratory diagnosis of malaria
8. Nosocomial infection
9. Prophylaxis of rabies
10. Bacterial spore
11. Manifestations caused by Candida albicans

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

12. Name any three bacterial vaccines
13. Name three methods of cultivation of viruses.
14. Name three antigen antibody reactions
15. Classify Dermatophytes.
16. Name three gaseous disinfectants.
17. Name three opportunistic fungal infections.
18. Name two Ova seen in a stool sample
19. Name the different Shigella species
20. Polio vaccine
21. Name three diseases caused by Streptococcus pyogenes.
22. Name two sexually transmitted diseases
23. Draw a labelled diagram of Entamoeba histolytica trophozoite.

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