Rajiv Gandhi University of Health Sciences, Karnataka

1601_2011_1_S223

I Year B.Sc. (M.L.T) Degree Examination – Mar 2013

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. Classify nervous system. Describe cerebrum
2. Name the male reproductive organs. Give a detailed account of testis
3. List the endocrine glands. Write in detail about the thyroid gland

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

4. Coronary arteries
5. Duodenum
6. Lung
7. Coronary arteries
8. Browcho pulmonary segments
9. Gall bladder
10. Ureter
11. Types of cartilage

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

12. Name the ear ossicles
13. Name the layers of eyeball
14. Difference between skeletal and cardiac muscle
15. Name the parts of stomach
16. Vermiform appendix
17. Name the parts of the ulna
18. Name the muscles in the medial compartment of the thigh
19. Name the histology of liver
20. Name the types of connective tissue
21. Name the component of cell
22. Boundaries of femoral triangle
23. Oribicularis oculi

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. M.L.T. Degree Examination – Mar 2013

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

ANATOMY – (Revised Scheme)

Q.P. CODE: 1601

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 Endocrine glands. Describe the pituitary gland in detail
2. Name the parts of the small intestine. Describe the duodenum
3. Describe the hip joint under the following headings: a) Bones b) Ligaments c) Muscles d) Movements d) Applied Aspect

SHORT ESSAYS **8 x 5 = 40 Marks**

4. Deltoid muscle
5. Ovary
6. Knee joint
7. Obturator canal
8. Testis
9. Paranasal air sinuses
10. Histology of muscle (skeletal)
11. Femoral triangle

SHORT ANSWERS **10 x 2 = 20 Marks**

12. Name the bones of ear (oscicles)
13. Name the Waldeyes lymphatic ring
14. Terminal branches of abdominal aorta
15. Carpal bones
16. Contents of spermatic cord
17. Parts of a nephron
18. Blood supply of thyroid
19. Anterior abdominal muscles (name them)
20. Histology of ureter
21. Name the cartilages of larynx

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Rajiv Gandhi University of Health Sciences, Karnataka

Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Sc. MLT Degree Examination Mar 2013

[Time: 3 Hours] [Max. Marks: 40]

PHYSIOLOGY

[Old Scheme]

Q P Code : 1602 – Section-A [40 Marks]

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

I LONG ESSAY (Answer any One) (1X10=20)

1. Describe cardiac cycle with the help of a diagram.
2. Describe the endometrial cycle and its hormonal regulation.

II SHORT ESAAY (Answer any Four) (4X5=20)

3. Draw the diagram of lung volumes & capacities and give its values.
4. List the functions of bile salts. Explain its role in digestion.
5. Describe the functions of Juxta glomerular Apparatus.
6. Describe the stages of Erythropoiesis.
7. Describe the functions of cerebellum.

III SHORT ANSWERS (5X2=10)

8. Define plasma clearance.
9. List the muscles of respiration.
10. List the functions of rods and cones.
11. List the clinical features of myxoedema.
12. Define synapse.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. (M.L.T) Degree Examination – Mar 2013

Time: 3 Hours **Max. Marks: 40 Marks**

Biochemistry

Q.P. Code : 1603

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

(Note : Both QP Codes 1602 and 1603 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. What is Henderson-Hasselbach equation? Give the uses of this equation. How is a universal buffer prepared?
2. What are the properties and biological importance of lipids? How are they classified?

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Explain the model of DNA
4. Homopolysaccharides
5. Define normality and molarity with suitable examples
6. Write a note on biologically important peptides
7. Cleaning of glasswares.

SHORT ANSWERS **5 x 2 = 10 Marks**

8. Glycogen
9. Purine bases
10. Mention the precautions while using pipettes
11. Conjugated proteins
12. Use of hot air oven

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. (M.L.T) Degree Examination – Mar 2013

Time: 3 Hours **Max. Marks: 40 Marks**

Pathology

Q.P. Code : 1604

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

(Note : Both QP Codes 1604 and 1605 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. What are the steps involved in the analysis of a sample of semen? Describe in detail the technique of sperm count
2. What are the steps involved in tissue processing? Describe the technique of paraffin embedding

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Decalcifying fluids
4. Mercurial fixatives
5. L moulds
6. Waxy casts
7. CSF findings in tuberculous meningitis

SHORT ANSWERS **5 x 2 = 10 Marks**

8. Active urine sediment
9. Types of microtome knives
10. Name 2 clearing agents
11. Blood in stool
12. Enterotome

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Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Sc. MLT Degree Examination - Mar 2013

[Time: 3 Hours] [Max. Marks: 40]

MICROBIOLGOY

Q P Code : 1605 – Section - B [40 Marks]

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

Use separate answer books for section A and section B

I LONG ESSAY (Answer any One) (1X10=20)

1. Describe the structure of Bacterial cell with a neat diagram and add a note on cell wall of the bacteria.
2. Define and classify sterilization. Explain the structure and procedure of autoclave in detail.

II SHORT ESAAY (Answer any Four) (4X5=20)

3. Explain bacterial growth curve.
4. Describe the steps involved in the procedure of Gram staining.
5. Write a note on the structure of Bacterial spore.
6. Explain Blood culture technique.
7. Describe the disc diffusion method of antibiotic sensitivity testing.

III SHORT ANSWERS (5X2=10)

8. Mention the two contributions of Louis Pasteur.
9. Add a note on Bacterial Flagella.
10. Name FOUR disinfectants used in the hospital.
11. Mention FOUR methods of culture techniques in the laboratory.
12. Name TWO selective media used in the laboratory.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. MLT Degree Examination – Aug 2013

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

PATHOLOGY (RS3)
Q.P. CODE: 3154

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. Name different fixatives and describe types and functions of formalin.
2. Describe tissue processing.
3. Describe method of H & E staining.
4. Describe the method of collection of urine and preservation.
5. Describe the method of collection of CSF and indications.
6. Describe various anticoagulants and mention the advantages and disadvantages of each.
7. Describe normal haemostasis.
8. Reticulocyte count
9. Describe the different methods of blood collection in haematology laboratory.
10. ESR

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

11. Grossing instruments
12. Mounting techniques and name two mountants.
13. Decalcification of tissues
14. ABO blood group system
15. Describe chemical examination of urine.
16. Preparation of body fluids for microscopic examination
17. Microscopy of sputum examination
18. Packed cell volume (PCV)
19. Describe the concentration method of stool examination.
20. Different methods of haemoglobin estimation
21. Laboratory safety
22. List three blood transfusion reactions.

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

23. Describe the different morphology of sperms.
24. Name types of cross matching.
25. Name the tests for bleeding disorders.
26. Name two ova and cysts in stool examination.
27. Name different crystals in urine microscopy
28. Name different microtomes
29. Name different angles of knives

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Rajiv Gandhi University of Health Sciences, Karnataka

1603_2013_2_S222

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. (M.L.T) Degree Examination – Aug 2013

Time: 3 Hours **Max. Marks: 40 Marks**

Biochemistry

Q.P. Code : 1603

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

(Note : Both QP Codes 1602 and 1603 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Define lipids. Classify lipids with example
2. With a neat diagram explain the different balances used in labs

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Mention the different PH indicators used in different types of titrations
4. Functions of carbohydrates
5. Write a note on primary structure of protein
6. Use, care and maintenance of centrifuge
7. Define normality and molality

SHORT ANSWERS **5 x 2 = 10 Marks**

8. Biological significance of PH
9. Beer lambert's law
10. List different types of RNA
11. Peptide bond
12. Purine base

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. MLT Degree Examination – Aug 2013

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

PHYSIOLOGY (RS3)
Q.P. CODE: 3152

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. Discuss briefly the electrical properties of cardiac muscle.
3. Explain excitation-contraction coupling.
4. Functions of saliva
5. Erythroblastosis foetalis
6. Briefly describe the mechanics of ventilation.
7. Define GFR. Enumerate the factors affecting GFR. Explain any one.
8. Enumerate the functions of thyroid hormone.
9. Discuss any three properties of reflexes.
10. Explain the features seen in diabetes mellitus.

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

11. Tabulate any two differences between REM and NREM sleep.
12. Functions of lymph
13. Name the components of the conducting system of the heart.
14. Trace the visual pathway.
15. Any three differences between myelinated and non-myelinated nerve fibre
16. Define jaundice and its types.
17. Draw a Spirogram and label it.
18. What is an anti-coagulant? Write the mechanism of action of any one.
19. Name the phases of deglutition.
20. What is Rouleaux formation?
21. Define ovulation. Give its hormonal basis.
22. Draw the structure of a synapse.

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

23. What is MCV? Give its normal value.
24. Define artificial kidney.
25. Gastrin
26. Define intrapleural pressure. Give its normal value.
27. List the anterior pituitary hormones.
28. Haemophilia
29. Define cardiac output.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. MLT Degree Examination – Aug 2013

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

BASIC ANATOMY (INCLUDING HISTOLOGY) (RS3)

Q.P. CODE: 3151

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. Uterus
2. Oesophagus
3. Histology of thin skin
4. Pleura
5. Thoracic duct
6. Fourth Ventricle of brain
7. Ureter
8. Boundaries and contents of femoral triangle
9. Blood supply of brain
10. Testis

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

11. Anatomical position
12. Name the bones forming Vertebral column.
13. Appendix – positions and applied aspects
14. Draw a neat, labeled diagram of spinal nerve.
15. Flexor retinaculum of hand
16. Difference between the right and left lungs
17. Formation of brachial plexus
18. Histology of liver
19. Internal thoracic artery
20. Blood supply of pancreas
21. Endoplasmic reticulum
22. Histology of Suprarenal gland

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

23. Name the bones of upper limb.
24. Name any four muscles of face.
25. Name the parts of large intestine.
26. Name the ear ossicles.
27. Parts of male urethra
28. Branches of abdominal aorta
29. Name the cartilages of larynx.

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1602_2013_2_S226

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. (M.L.T) Degree Examination – Aug 2013

Time: 3 Hours **Max. Marks: 40 Marks**

Physiology

Q.P. Code : 1602

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

(Note : Both QP Codes 1602 and 1603 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Explain the various stages erythropoiesis. Enumerate the factors affecting it
2. Describe the physiological actions of growth hormone on the body. Add a note on gigantism

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Trace the pathway for pain
4. Tabulate the differences between the I and II heart sounds
5. Define immunity. Briefly describe the types of immunity
6. Juxta glomerular apparatus
7. Briefly describe the phases of gastric juice secretion

SHORT ANSWERS **5 x 2 = 10 Marks**

8. Enumerate any four the functions of skin
9. Draw a spirogram showing the lung volumes and capacities
10. Define cyanosis
11. Draw the diagram of a nephron and label its parts
12. Define arterial blood pressure giving normal values

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Rajiv Gandhi University of Health Sciences

First year B.Sc. MLT Degree Examination - Aug 2013

[Time: 3 Hours] [Max. Marks: 40]

MICROBIOLGOY

Q P Code : 1605 – Section - B [40 Marks]

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

Use separate answer books for section A and section B

I LONG ESSAY (Answer any One) **(1X10=20)**

1. Describe the structure of compound microscope with a neat, labeled diagram. Add an account of the uses of its parts.
2. List down the characteristics of an ideal disinfectant. Describe the different chemical disinfectants and their uses.

II SHORT ESAAY (Answer any Four) **(4X5=20)**

3. Classify bacteria according to their shape.
4. Name the different types of culture media and mention their uses.
5. Describe the various types of bacterial filters and their uses.
6. Briefly explain the metabolism of bacteria.
7. Explain the principle, method and uses of Zeil - Neelson's staining.

III SHORT ANSWERS **(5X2=10)**

8. Name TWO capsule bearing bacteria.
9. Mention the two methods of pasteurization.
10. Name FOUR antibiotics that act on the protein synthesis of bacteria.
11. Explain the role of plasmids in bacteria.
12. Name THREE dry heat technique of sterilization.

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1604_2013_2_S050

Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. (M.L.T) Degree Examination – Aug 2013

Time: 3 Hours **Max. Marks: 40 Marks**

Pathology

Q.P. Code : 1604

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

(Note : Both QP Codes 1604 and 1605 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Describe in detail about the methods used to decalcify tissues before processing. Give the advantages and disadvantages of each method
2. Classify fixatives. Give the mode of action, advantages and disadvantages of formaline as a fixative

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Steps in H & E staining
4. Urine analysis
5. CSF examination
6. Quality control in pathology
7. Dispatch of reports

SHORT ANSWERS **5 x 2 = 10 Marks**

8. Semen analysis
9. Stool examination
10. Grossing of stomach for a tumour
11. Filing of biopsy slides
12. Embedding media in hisopathology

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. MLT Degree Examination – Aug 2013

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

BIOCHEMISTRY (RS3)

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 classification and functions of carbohydrates.
2. Write briefly a note on nucleotides.
3. Explain bicarbonate buffer system.
4. Define essential fatty acid. What are its functions?
5. Write the classification of amino acids based on nutritional requirement with examples.
6. What are solutions? Classify them with suitable examples.
7. Add a note on hot air oven with diagram.
8. Explain Valency, Equivalent Weight, Normality, Molecular Weight and Molality with suitable examples.
9. Explain two-pan laboratory balance with a diagram.
10. Explain saturated and super saturated solutions with suitable examples.

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

11. Give any three major responsibilities of health care personnel.
12. Write a note on different types of tubes used in the laboratory.
13. Give any three prefixes used in metric system.
14. Triglycerides and cholesterol
15. Write the properties of salts.
16. What are bases? Give two examples.
17. Magnetic stirrer – components and use
18. What is part dilution? Give an example.
19. Uses of refrigerators and cold boxes in laboratory
20. SI units and classification
21. Give the principle of centrifugation. Explain different rotor heads.
22. Draw the graph showing relationship between:
    a. Absorbance and concentration
    b. % Transmission and concentration

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

23. Automated pipette
24. Reference electrode
25. Mention the types of RNA.
26. Mention different types of waste in a laboratory.
27. Definition of molarity and normality
28. Name two indicators.
29. Write Henderson – Hasselbalch's equation.

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Rajiv Gandhi University of Health Sciences

First year B.Sc. MLT Degree Examination Aug 2013

[Time: 3 Hours] [Max. Marks: 80]

ANATOMY

[Revised Scheme]

Q P Code : 1601

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

I LONG ESSAY (Answer any Two) **(2X10=20)**

1. Describe the blood supply of the heart. Add a note on its applied aspects.
2. Name the salivary glands. Describe in detail the parotid gland.
3. Describe the parts, supports and blood supply of uterus.

II SHORT ESAAY **(8X5=40)**

4. Gluteus maximus muscle.
5. Midbrain
6. Anal canal
7. External carotid artery
8. Parasympathetic Nervous system
9. Broncho pulmonary segments
10. Synovial joints
11. Microscopic Structure of a compact Bone

III SHORT ANSWERS **(10X2=20)**

12. Parts of hip bone
13. Clinical importance of Median cubital vein
14. Fertilization
15. Islets of langerhams
16. Features of Down Syndrome
17. Radial artery
18. Parts of lacrimal apparatus
19. Histology of Thyroid gland
20. Name 3 muscles of Anterior Abdominal Wall.
21. What are the differences between an artery and vein?

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