Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (M.L.T) Degree Examination – APRIL 2015

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

BIOCHEMISTRY – II (RS - 2)

Q.P. CODE: 1231

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. Write briefly the reaction steps in glycolysis. Explain the energetics of glycolysis.
2. Explain beta-oxidation of fatty acid. Write the energetics of oxidation of Palmitic acid.
3. Describe the sources, daily requirement and normal levels of vitamin B12. Enumerate any three functions of Vitamin B12.

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

4. Explain glycogen synthesis.
5. What is atherosclerosis? What are the risk factors of atherosclerosis?
6. Write the principle, instrumentation and application of atomic absorption spectrophotometry.
7. Write the principle and instrumentation of spectrophotometry.
8. Define adsorption, viscosity and surface tension.
9. Explain the mechanism of action of enzyme.
10. Write the principles and application of serum electrophoresis.
11. Write the urea cycle.

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

12. Enumerate any three glycogen storage disorders.
13. Enumerate any six water soluble vitamins and their chemical name.
14. What is Km? What is the significance of Km?
15. Write any three functions of Riboflavin.
16. What is enzyme specificity? Enumerate any three types of specificity with suitable examples.
17. Define BMR.
18. Give three examples of coenzymes.
19. Define calorific value of food, and give the calorific value of carbohydrate proteins and lipids.
20. What are coenzyme form of niacin and thiamine?
21. Enumerate any three functions of dietary fibres.
22. Which test is used for the detection of ketone bodies and glucose in urine?
23. What is the function of Ig E and Ig A?

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (M.L.T) Degree Examination – APRIL 2015

Time: Three Hours Max. Marks: 80 Marks

MICROBIOLOGY – II (RS-2)

Q.P. CODE: 1232

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 in detail the pathogenicity and laboratory diagnosis of Entamoeba histolytica.
2. Describe life cycle and laboratory diagnosis of Ascaris lumbricoides.
3. Write in detail Human immunodeficiency virus, modes of transmission, prevention & prophylaxis.

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

4. Filariasis
5. Herpes simplex virus
6. Trichuris trichura
7. Aspergillosis
8. Life cycle of Taenia solium
9. Rhinosporidiosis
10. Giardia lamblia
11. Leishmania donovani- life cycle and laboratory diagnosis

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

12. Name 3 genera of dermatophytes and state difference in their conidiation.
13. Oral Polio Vaccine
14. Name 3 agents of eumycotic mycetoma.
15. Negri bodies
16. Chick embryo and its use
17. Name 3 viral haemorrhage fevers seen in India.
18. Hepatitis B vaccine
19. Thick and thin blood smear examination
20. Histoplasmosis
21. SARS virus
22. Measles vaccine
23. Name 3 dimorphic fungi commonly found in India.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (M.L.T) Degree Examination – APRIL - 2015

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

PATHOLOGY – II (RS - 2)

Q.P. CODE: 1233

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 cryostat and its uses.
2. Name different methods of Hb estimation. Explain Sahli's method.
3. Describe museum technique.

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

4. Automatic slide stainer
5. Electron microscope
6. Reticulocyte count
7. Describe morphology of different types of WBCs
8. Osmotic fragility test
9. Hb electrophoresis
10. Schilling test
11. Methods of doing bone marrow aspiration

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

12. Special stains used for mucins.
13. Wintrobe's tube
14. Applications of computer in pathology
15. Abnormal hemoglobin pigments.
16. Normal fibrinolytic systems
17. PT & PTT
18. Leishman Stain.
19. Anticoagulant used in Blood Bank.
20. Factor VIII
21. Clearing
22. Determination of HbF and HbA2
23. Rotary microtome

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (M.L.T) Degree Examination – APRIL 2015

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

BIOCHEMISTRY – II

Q.P. CODE: 3156

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 chemistry, sources, RDA, functions and deficiency manifestations of "Vitamin C".
2. What are "clearance tests"? Give a detailed account of the procedure for carrying out the endogenous creatinine clearance test. Add a note on the biological reference intervals and the clinical significance.
3. Explain the principle of Spectrophotometry. Draw a schematic diagram of a single – beam spectrophotometer. Add a note on standardization of Spectrophotometer.

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

4. Types of water in a laboratory. Discuss the NCCLS specification for laboratory water.
5. What are coenzymes? Discuss the salient features of coenzymes. Add a note on metalloenzymes.
6. Explain the preparation of a calibration curve citing an example. Add a note on the linearity of the method based on the calibration curve.
7. Discuss Gouty arthritis in detail. Give the principle for the estimation of uric acid.
8. Explain the tissue distribution and functions of chondroitin sulfate and heparin.
9. Explain the tertiary structures of proteins citing an example.
10. Urea cycle and energetics.
11. Procedure for ammonium chloride loading test and interpretation.

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

12. Anaplerotic role of TCA cycle.
13. Types of RNA
14. Albuminometer and Urinometer.
15. Preparation of protein free filtrate for quantitative estimations-Glucose by Reductometric method and Creatinine by Jaffe's method in blood.
16. What is meant by Timed sample collection? Explain with one example each under serum and urine.
17. Name three glycogen storage disorders and the enzyme associate with it.
18. Discuss different sample collection tubes used during phlebotomy. Add a note on the order of draw during multiple specimen collection.
19. Functions of DNA
20. Classification of proteins based on nutritional value.
21. Inhibitors of glycolysis.
22. Microalbuminuria.
23. Riboflavin

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (MLT) Degree Examination - APRIL 2015

Time: Three Hours Max. Marks: 80 Marks

Microbiology – Paper II (RS-3 Scheme)

Q.P. CODE: 3157

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. Name the etiological agent of Syphilis. Explain in detail about pathogenicity and laboratory diagnosis of Syphilis.
2. Classify Vibrios. Describe the pathogenicity and laboratory diagnosis of Cholera.
3. Enumerate the intestinal nematodes. Explain the lifecycle and laboratory diagnosis of Ascaris lumbricoides.

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

4. Explain the morphology and cultural properties of Mycobacterium tuberculosis.
5. Classify Streptococcus.
6. Laboratory diagnosis of Tetanus
7. Laboratory diagnosis of Anthrax
8. Widal test
9. Stool examination for parasitic infections
10. Life cycle of Toxoplasma gondii
11. Microfilaria of Wuchereria bancrofti

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

12. Nagler reaction
13. CAMP test
14. Antistreptolysin O test
15. Enumerate the Diarrheagenic Escherichia coli.
16. Indole test
17. Satellitism
18. LD bodies (Leishman-Donovan bodies)
19. Difference between Taenia solium and Taenia saginata (any three differences)
20. Egg of Hook Worm
21. Gametocytes of Plasmodium falciparum
22. Mantoux test
23. Morphology of Hydatid cyst

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (MLT) Degree Examination - APRIL - 2015

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

Pathology – Paper II (RS-3 Scheme)

Q.P. CODE: 3158

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

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

1. Describe tests for the laboratory diagnosis of Megaloblastic anemia.
2. Describe various anticoagulants used in haematology. Enumerate the advantages and disadvantages of each.
3. Describe briefly instruments used in histopathology.

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

4. Write about normal hemostasis.
5. Write about peripheral smear and the qualities of an ideal smear.
6. Perl's satin
7. Test for auto-immune haemolytic anemia
8. Laboratory diagnosis of spherocytic anemia
9. BT (bleeding time)
10. Quality control in hematology
11. Myelopoiesis

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

12. Name four mounting media.
13. Name different types of cells seen in a normal bone marrow.
14. List four Haemoparasites.
15. Normal values of PT and APTT
16. Write two points about Xylene.
17. Morphology of monocytes and its function
18. Absolute eosinophil count
19. Methods used to detect PCV (Hematocrit)
20. What is Buffy coat? Write uses of Buffy coat preparation.
21. Name three special stains for demonstration of fungi.
22. Name three Cytochemical stain.
23. List three causes for prolonged bleeding time.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (M.L.T) Degree Examination – SEPTEMBER 2015

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

BIOCHEMISTRY – II (RS - 2)

Q.P. CODE: 1231

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. Explain cholesterol metabolism in the body.
2. What are the factors affecting enzyme activity? Add a note on enzyme specificity.
3. Write the sources and functions of Vitamin C. Add a note on Vitamin C functions.

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

4. Explain the importance of dietary fibres in nutrition.
5. Write a note on atherosclerosis.
6. What are the sources, requirements, functions and deficiency of Vitamin E?
7. Vitamin B_{12}
8. Write a note on obesity.
9. Explain Wald's visual cycle.
10. What are the organic constituents present in urine?
11. Explain Gout.

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

12. What is viscosity?
13. Write the normal values of urea, uric acid and creatinine.
14. Write the difference between plasma and serum.
15. Note on Jaffe's test
16. Name the vitamin which causes pellagra and write its manifestation.
17. What is nitrogen balance?
18. Write a note on Pyruvate dehydrogenase complex.
19. How are sugars absorbed?
20. Write a note on essential aminoacids.
21. Write the principle of atomic absorption spectroscopy.
22. Write the importance of 2,3BPG.
23. Parental nutrition

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (M.L.T) Degree Examination – SEPTEMBER 2015

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

MICROBIOLOGY – II (RS-2)

Q.P. CODE: 1232

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. Enumerate the fungi causing opportunistic infection. Describe the laboratory diagnosis of fungal infection.
2. Describe the life cycle, pathogenicity, and laboratory diagnosis of Plasmodium vivax
3. Describe the morphology, antigenic variations, pathogenesis and laboratory diagnosis of influenza virus.

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

4. Blastomyces dermatitidis
5. Describe dermatophytes
6. Laboratory diagnosis of kala-azar
7. Life cycle of Diphyllobothrium latum
8. Pathogenicity and clinical features of Wuchereria bancrofti
9. Interferon
10. Epstein-Barr virus
11. Clinical features and laboratory diagnosis of Hepatitis A virus

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

12. Name three fungi causing superficial mycosis
13. Slide culture technique
14. Extra-intestinal amoebiasis
15. Balantidium coli
16. Casoni's test
17. Loeffler's pneumonia
18. Name any three non-bile stained ova
19. Viral capsid
20. Herpes Zoster
21. Mumps
22. Kyasanur forest disease
23. Structure of Human Immunodeficiency virus

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (M.L.T) Degree Examination – SEPTEMBER 2015

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

PATHOLOGY – II (RS - 2)

Q.P. CODE: 1233

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 cryostat & its uses.
2. Role of fluorescence microscopy in pathology.
3. Describe different anti coagulants used in Haematology lab & advantages & disadvantages of each.

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

4. Ultra Microtome
5. Special stains for lipid.
6. Mounting techniques.
7. Romanowsky stains.
8. LE Cell.
9. Quality control in Haematology analyzer.
10. Prothrombin time.
11. Haemoparasites.

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

12. Types of microtome knives.
13. Name three special stains used to demonstrate connective tissue.
14. Turk's Fluid.
15. How is haemosiderin detected in the urine. Name two conditions associated with haemosiderinuria.
16. List three preanalytical variables in coagulation testing.
17. What is normal bleeding time. Name two conditions where it is prolonged.
18. Name three lab tests done in iron deficiency anemia.
19. Name three anticoagulants used in haematology and the test where it is used.
20. What is Absolute eosinophil count. Name four conditions where it is increased.
21. Contents of Leishman's stain.
22. Reticulocyte count.
23. What is ESR? What are the stages?

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (M.L.T) Degree Examination – SEPTEMBER 2015

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

PATHOLOGY – II (Revised Scheme)

Q.P. CODE: 1606

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. a) List the types of Hematoxylins.
   b) Describe in detail the principle and procedure for staining tissue sections by Hematoxylin and Eosin (H and E) method. (6+4 = 10)
2. a) List the laboratory investigations done and findings in a case of anaemia.
   b) Add a note on the role of Red Cell Indices in the diagnosis and classification of anaemias. (5+5 = 10)
3. a) Describe in detail the procedure of section cutting.
   b) Add a note on trouble shooting. (6+4 = 10)

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

4. Automation in histopathology
5. Mounting of Museum specimens
6. Frozen section and its utility
7. List the types of microscopes. Add a note on fluorescent microscopy.
8. Describe the principle of Romanowsky stains. Give four examples.
9. What is Erythrocyte Sedimentation Rate (ESR)? Write a note on anticoagulants used, method of estimation and normal values of ESR.
10. Name any three anticoagulants used in the clinical laboratory. Add a note on their modes of action and uses.
11. Draw a flow chart representing the normal Coagulation Cascade.
12. List the various methods of hemoglobin estimation with their principles.
13. Reticulocyte count

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

14. Mention normal APTT and any two causes of prolonged APTT.
15. Principle and composition of Perl's stain
16. Uses of PAS stain
17. Principle of Direct Coomb's test
18. What is normal platelet count? List two causes of thrombocytopenia.
19. Name any two stains for fats.
20. List the uses of alcohol in pathology.
21. Name types of microtomes.
22. List the Haemoparasites seen in blood.
23. What is normal Differential Leucocyte Count (DC) in adult human blood?

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (M.L.T) Degree Examination – SEPTEMBER 2015

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

MICROBIOLOGY – II (Revised Scheme)

Q.P. CODE: 1607

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 lifecycle and laboratory diagnosis of Ancylostoma duodenale. Add a note on its prevention.
2. Describe the morphology, pathogenesis and laboratory diagnosis of a case of Pulmonary tuberculosis. Add a note on RNTCP.
3. Enumerate the causes of Bacterial diarrhoea. Describe the pathogenesis and laboratory diagnosis of Vibrio cholerae.

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

4. Wuchereria bancrofti
5. Ziehl Neelson stain
6. Laboratory diagnosis of Entamoeba histolytica
7. Taenia solium
8. Laboratory diagnosis of Urinary tract infection
9. VDRL
10. Giardia lamblia
11. Gas gangrene
12. Blood culture
13. Bacterial meningitis

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

14. Grams stain
15. Enterobius vermicularis
16. Coagulase test
17. Fasciola hepatica
18. ASLO test
19. Collection of urine samples for culture
20. Gametocytes of Plasmodium
21. CAMP test
22. Antibiotic susceptibility testing
23. Toxoplasma gondii

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (M.L.T) Degree Examination – SEPTEMBER 2015

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

BIOCHEMISTRY – II (Revised Scheme)

Q.P. CODE: 1608

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 of Glycolysis and add a note on its energetics
2. Describe the four levels of structure of protein
3. Describe the source, daily requirements, deficiency disorders and biochemical role of vitamin C

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

4. Flame photometer
5. Explain the following aspects of riboflavin a) Coenzyme forms b) Biochemical functions
6. Describe the causes and features of Vitamin D deficiency
7. Factors affecting enzyme activity
8. Enzyme inhibition
9. Chromatography
10. Explain the following aspects of thiamin
    a) Coenzyme form b) Biochemical functions and c) Deficiency
11. Atomic absorption
12. Deficiency manifestation of vitamin A
13. Isoenzymes and their clinical significance

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

14. Mention the function of vitamin K
15. Heteropolysaccharides
16. Electrophoresis
17. Blood sample collection
18. Define Km value. What is its significance?
19. Coenzyme forms of four B-complex vitamins
20. Gout
21. Diabetes Mellitus
22. Difference between starch and glycogen
23. Functions of citric acid cycle

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (M.L.T) Degree Examination – SEPTEMBER 2015

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

BIOCHEMISTRY – II

Q.P. CODE: 3156

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 various types of enzymes inhibitions and explain them with examples.
2. Write the chemistry, sources, RDA, biochemical function, and deficiency manifestation of Folic acid.
3. Define clearance test. Write creatinine clearance in detail.

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

4. Write the composition and functions of Mucopolysaccharides.
5. Mention a technique of preparing a calibration curve. Add a note on its uses.
6. What are the biochemical functions of pyridoxine?
7. Classify enzymes.
8. Write a note on functions of DNA and RNA.
9. Urea cycle.
10. Name the normal and abnormal constituents of urine.
11. Mention disorders of Glycogen metabolism.

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

12. Significance of HMP shunt pathway.
13. Write the reference range of serum urea, uric acid and creatinine.
14. Gout.
15. Antivitamins.
16. Beri Beri.
17. HbA1c-reference range, significance.
18. MSUD and Alkaptonuria
19. Mention any three functions of Proteins.
20. Km value and its significance.
21. Write the principle of nephelometry.
22. What is Ammonium chloride loading test?
23. Mention colour reactions of aminoacids.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (M.L.T) Degree Examination – SEPTEMBER 2015

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

MICROBIOLOGY – II (RS3)

Q.P. CODE: 3157

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. Enumerate the organisms causing enteric fever. Describe the pathogenicity and laboratory diagnosis of Salmonella typhi. Add a note on its prophylaxis.
2. Classify spirochetes. Discuss the laboratory diagnosis of Syphilis in detail.
3. Discuss the general characteristics and classification of Nematodes. Describe the morphology, life cycle, pathogenicity, clinical manifestations and laboratory diagnosis of Wuchereria bancrofti.

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

4. Laboratory diagnosis of Streptococcus pyogenes.
5. Laboratory diagnosis of tetanus.
6. Clinical manifestation of gonorrhoea.
7. Satellitism.
8. Life cycle of Entamoeba histolytica.
9. Clinical features and laboratory diagnosis of toxoplasmosis.
10. Hydatid cyst.
11. Morphology and life cycle of Strongyloides stercoralis.

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

12. Coagulase negative Staphylococcus.
13. DPT Vaccine
14. MacFadyean's reaction.
15. Weil-Felix test.
16. Name any three selective media used in growth of Vibrio cholerae.
17. Laboratory diagnosis of Leptospirosis.
18. Define vector. Give two examples.
19. Name three Leishmania species pathogenic to man.
20. Sexual cycle of malarial parasite.
21. Scolex of Taenia solium.
22. Life cycle of Fasciola hepatica.
23. Larva migrans.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (MLT) Degree Examination - SEPTEMBER 2015

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

Pathology – Paper II (RS-3 Scheme)

Q.P. CODE: 3158

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

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

1. Discuss normal hemostasis and mechanism of normal coagulation. Mention the various coagulation tests. Explain the methodology of three basic coagulation tests.
2. Describe the technique of section cutting. Write the procedure of staining tissue by Haematoxylin and eosin.
3. List the different methods of estimation of haemoglobin. Describe the principle and procedure of estimation of hemoglobin by cyanmethhaemoglobin method.

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

4. Quality control in haematology laboratory
5. Calculation of red cell indices
6. Osmotic fragility test
7. Cytochemistry in hematology
8. Fluorescent microscopy
9. Determination of BT and CT
10. Regressive and progressive staining methods
11. Describe the procedure of bone marrow aspiration and processing.

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

12. ICDS classification and coding
13. Name two Metachromatic Stains and their uses.
14. Preparation of eosin stain
15. Write the stages of haematopoiesis.
16. Write the three causes of eosinophilia.
17. List the different types of microtomes.
18. Estimation of Erythrocyte Sedimentation Rate (ESR)
19. Name the different types of Hematoxylins.
20. Mention the uses of Buffy coat preparation.
21. Cryostat and its uses
22. Draw a neat diagram of L.E cell and label the parts.
23. Enumerate three causes of Thrombocytopenia

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