Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (MLT) Degree Examination - May 2016

Time: Three Hours Max. Marks: 80 Marks

Biochemistry – Paper II (RS-3 Scheme)

Q.P. CODE: 3156

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 enzymes? Explain various factors affecting enzyme activity.
2. Explain principle and applications of spectrophotometry. Add a note on components of spectrophotometer.
3. Enumerate the reactions of Citric Acid Cycle. Add a note on its energetics.

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

4. Structure of tRNA
5. Transamination in detail
6. Creatinine clearance test
7. Anticoagulants
8. Digestion of carbohydrates
9. Biochemical functions of Niacin
10. Precipitation reaction of proteins
11. Explain (a) MSUD (b) Lesch Nyhan syndrome (c) Alkaptonuria

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

12. Linearity of a method and its importance
13. What is a buffer? Give two examples.
14. Preparation of calibration curve
15. What are Anomers? Give two examples.
16. Peptide bond formation
17. Procedure of collection of 24 hour urine sample
18. What are Mucopolysaccharides? Mention any two functions of them.
19. Beri-beri
20. Write reference range of serum urea and mention its clinical importance.
21. Phenylketonuria
22. Quantitative analysis of cerebrospinal fluid
23. Name any three indicators with their uses.

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (M.L.T) Degree Examination – May 2016

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 bacteria causing enteric fever. Describe the lab diagnosis of Enteric fever.
2. Enumerate bacteria causing Urinary tract infection. Describe the lab diagnosis of urinary tract infection.
3. Describe the Life cycle, pathogenesis and laboratory diagnosis of Ancylostoma duodenale.

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

4. Methods of antibiotic susceptibility testing.
5. Lab diagnosis of Streptococcus pyogenes.
6. Life cycle of Ascaris lumbricoides.
7. RNTCP.
8. Morphology of trophozoite and Cyst of Entamoeba histolytica.
9. Peripheral smear examination for blood parasites.
10. Types of hospital acquired infections and its prevention.
11. Toxigenicity testing for Corynebacterium diphtheriae.

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

12. Name 3 zoonotic bacterial diseases.
13. Name 3 selective media.
14. Name 3 species of Shigella.
15. Name 3 parasites causing diarrhoea.
16. Name 3 oxidase positive bacteria.
17. Indole test.
18. Methods to Prevent swarming in bacteria.
19. DPT vaccine.
20. Casoni's test
21. List 3 drugs used in the treatment of tuberculosis.
22. Egg of Trichuris trichura.
23. Name 3 bacteria causing Food poisoning.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (MLT) Degree Examination - May 2016

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 the following tests used in investigation of anaemia.
   a) Schilling test
   b) Vitamin B12 and folate assay
   c) Estimation of serum and iron and iron binding capacity.
2. Describe the methods of collection of blood and anticoagulants used.
3. Describe the automated tissue processor. Add a note on use of microtomes and staining of tissue sections.

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

4. Briefly describe maintenance of records and filing of slides.
5. Describe uses of fluorescent and dark ground microscope.
6. Describe procedure of Reticulocyte count.
7. Describe stem cells and applications of stem cell therapy.
8. Briefly describe microphotography and its applications.
9. Describe the tests for autoimmune hemolytic anaemia.
10. Briefly describe assay of coagulation factors.
11. How do you measure Haematocrit? What is the significance of Haematocrit?

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

12. What is osmotic fragility test?
13. Describe staining of tissue section to demonstrate carbohydrates.
14. What is Sickling test?
15. What are uses of frozen section?
16. Describe method of determining HbF.
17. What is absolute eosinophil count? Give their normal value.
18. Name RBC indices and give their normal value.
19. Describe test of Fibrinolytic activity.
20. What are the indications of electron microscopic study of tissue?
21. What are the features of LE cell?
22. How do you measure abnormal haemoglobin pigments?
23. What are the methods of bone marrow study?

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (MLT) Degree Examination - AUG/SEP 2016

Time: Three Hours Max. Marks: 80 Marks

Biochemistry – Paper II (RS-3 Scheme)

Q.P. CODE: 3156

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. Give an account of Watson-Crick structure of DNA. Add a note on different forms of DNA.
2. Discuss enzyme inhibition in detail with examples.
3. Write the pathway of degradation of purine nucleotides. Give the normal serum value of uric acid and explain the features of Gout.

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

4. Isomerism in monosaccharides
5. Diabetes Mellitus
6. Reflectance photometry – principle, instrumentation and applications
7. Abnormal physical characteristics and chemical constituents of urine
8. Indicators
9. Glycogen storage disorders
10. Alkaptonuria and Phenylketonuria
11. Denaturation of proteins

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

12. Ninhydrin test
13. Coenzymic forms of (a) Vitamin B1 (b) Vitamin B5 (c) Vitamin B7
14. Microalbuminuria
15. Disorders associated with carbohydrate digestion
16. Creatinine clearance
17. Maple syrup urine disease
18. Glycosuria
19. Preservatives used for urine collection
20. Grades of chemicals used in a laboratory
21. Blood urea nitrogen
22. Ascitic fluid
23. Derivatives of monosaccharides

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (MLT) Degree Examination - SEP-2016

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. Enumerate malarial parasites. Describe the life cycle of Plasmodium falciparum and add a note on laboratory diagnosis of malaria.
2. Classify Spirochaetes. Discuss the morphology and laboratory diagnosis of Treponema pallidum.
3. Describe the pathogenesis and laboratory diagnosis of Typhoid fever.

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

4. Coagulase negative Staphylococci
5. Life cycle of Entamoeba histolytica
6. Classify mycobacteria. Discuss atypical mycobacteria.
7. Infection and laboratory diagnosis of Pseudomonas aeruginosa
8. Laboratory diagnosis of Kala Azar
9. ASO test
10. Laboratory diagnosis of Pulmonary tuberculosis
11. Kirby Bauer method

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

12. Name three Gram Positive Bacteria.
13. NIH swab
14. Non Gonococcal urethritis
15. Eltor vibrios
16. Define significant bacteriuria.
17. Enumerate three bacteria causing diarrhoeal disease.
18. Hydatid cyst
19. Biochemical properties of Klebsiella
20. CAMP test
21. Morphology of Hookworm egg
22. Indole test
23. Weil-Felix test

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (MLT) Degree Examination - SEP 2016

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. What are Hematoxylins? Classify Hematoxylins. Describe any one method of staining of Hematoxylin and Eosin stain
2. Discuss in detail Paraffin section cutting. Add a note on artifacts in Paraffin section cutting.
3. Discuss the preparation of a peripheral smear and staining by any one of the Romanowsky's stains.

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

4. Hemoglobin electrophoresis
5. Citrate anticoagulant
6. Microtome knives
7. Automatic slide stainer
8. Maintenance of records
9. Preparation of an ideal smear
10. Activated Partial Thromboplastin time
11. Periodic Acid Schiff stain

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

12. Write three indications for bone marrow aspiration.
13. What are the stages of Erythrocyte Sedimentation Rate (ESR)?
14. Write the normal platelet count with two causes of thrombocytopenia.
15. Calculate Mean Corpuscular Volume (MCV).
16. What is the normal Hemoglobin level and RBC count in an adult male?
17. Write any three special stains used in the identification of connective tissue.
18. Importance of Perl's stain
19. What are the uses of Buffy coat?
20. Care of microtome
21. Honing
22. Supravital staining
23. Write the normal value of eosinophil in peripheral blood. Mention two causes of eosinophilia.

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