Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (M.L.T) Degree Examination – 16-Jul-2021

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

BIOCHEMISTRY – PAPER II (RS3)

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 steps of catabolism of phenyl alanine and tyrosine. Indicate the inborn errors associated with this pathway.
2. Explain in detail the sources, RDA, biochemical functions and deficiency manifestations of thiamine.
3. Explain TCA cycle with its energetics.

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

4. How is urea produced in the body?
5. Mention the abnormal constituents of urine and their clinical significance.
6. Explain the principle of Partition chromatography. Write a note on its applications.
7. Structure of t RNA.
8. What are the factors affecting enzyme activity?
9. Define Accuracy and Precision. How they are checked in Clinical Laboratory?
10. Define clearance. Explain creatinine clearance in detail.
11. Quantitative analysis of constituents in CSF fluids.

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

12. Name the enzymes for gluconeogenesis.
13. Name three anticoagulants and their use.
14. Write a note on applications of Glucometers.
15. Write a note on importance of calibration curve.
16. Give the clinical significance of uric acid.
17. What are the disease manifestations of deficiency of vitamin Niacain?
18. Denaturation of proteins.
19. Explain the term active site of enzyme.
20. Mention types of solutions.
21. Write a note on osmometry.
22. Explain the principle of Turbidimetry.
23. Write a note on invert sugars.

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II Year B.Sc. (MLT) Degree Examination - 19-Jul-2021

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 ESSAY (Any Two) **2 x 10 = 20 Marks**

1. Name the causative agents of Malaria. Describe life cycle and laboratory diagnosis of P. falciparum malaria.
2. Classify Streptococci. Describe the pathogenicity and laboratory diagnosis of S. pyogenes.
3. Enumerate the organisms causing gas gangrene. Describe the pathogenicity, laboratory diagnosis of Clostridium perfringens.

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

4. Widal test.
5. Life cycle of T. solium.
6. Pathogenesis and laboratory diagnosis of T. gondii.
7. Drancunculus medinensis.
8. Bacterial meningitis.
9. UTI
10. Hymenolepis nana
11. Atypical mycobacteria.

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

12. Name three bile stained ova.
13. Bubonic plague.
14. Satellitism.
15. Name any three pigment producing bacteria.
16. Morphology of Gonococcus.
17. Morphology of Giardia lamblia.
18. Define definitive host. Give two examples.
19. Infections produced by klebsiella.
20. Mycoplasma.
21. Lepromin test.
22. DPT vaccine.
23. String test.

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (MLT) Degree Examination - 22-Jul-2021

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

PATHOLOGY – PAPER II (RS3)
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 is Hematocrit? Describe the various methods of measuring it.
2. Write an essay on automation in histopathology. Add a note on automatic slide stainer.
3. Describe the mechanisms of blood coagulation.

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

4. Reticulocyte count
5. Cytochemistry in leukaemias
6. Museum technology
7. Sickling test
8. List all the Platelet Function tests and explain any one.
9. Demonstration of LE cells
10. Test done for vitamin B12 deficiency
11. Write in detail about Embedding media.

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

12. What is the significance of OFT (Osmotic Fragility Test)?
13. What are abnormal haemoglobin pigments?
14. Name the different anticoagulants used for various haematological tests.
15. Mention three uses of electron microscope.
16. Site for bone marrow aspiration and biopsy
17. Write three causes of eosinophilia.
18. List the stages of normal Erythropoiesis.
19. Selection criteria for paraffin
20. List the different types of microtomes.
21. List the different methods of Hb estimation.
22. Write normal values of Hb, PCV, ESR and WBC count.
23. What is mordant? Give an example.

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. (MLT) Degree Examination - 30-Jul-2021

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

BIOCHEMISTRY – PAPER III (RS-3)

Q.P. CODE: 3159

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 any two sources for Vitamin D. Describe its biochemical functions and deficiency manifestations.

2. What is the biological reference range for Sodium and Potassium? Explain the mechanism of their absorption and the disorders associated with the metabolism of sodium and potassium.

3. Explain the regulation of PH by different mechanisms.

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

4. Iron absorption.
5. Define Basal Metabolic Rate (BMR) and write the factors affecting BMR.
6. Explain the classification of Lipo proteins.
7. Types of Jaundice.
8. Kwashiorkor and marasmus.
9. Radio Immunoassay (RIA).
10. Absorption of calcium.
11. Significance of HMP shunt.

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

12. Dietary fibers.
13. Respiratory acidosis.
14. Define two reactions of detoxification.
15. Ketonuria.
16. Functions of phosphorous.
17. Functions of Albumin.
18. Post translational modifications.
19. Functions of Thyroid hormones.
20. Galactosemia.
21. Types of automation.
22. Define BMR and write the normal value.
23. Westgard rules.