Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. (MLT) Degree Examination - 03-Jan-2022

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. Write chemistry, RDA, sources and functions of vitamin D. Add a note on its deficiency manifestations.
2. Explain the process of translation in detail.
3. What is β oxidation? Write the reactions of β oxidation and its energetics.

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

4. What are Lipoproteins? Write the classification and functions of Lipoproteins.
5. Significance of HMP Shunt pathway
6. Principles of separation of plasma proteins by electrophoresis. Mention the different bands obtained in normal pattern.
7. Post-Translational modifications
8. Biological reference intervals
9. Principle and applications of flame photometry.
10. Tests based on metabolic and excretory function of liver
11. Functions of phosphorus.

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

12. Mention any three enzyme markers of liver diseases with their normal serum levels.
13. Functions of thyroid hormones.
14. Composition of gall stones and write the qualitative tests to identify them
15. Nutritional importance of dietary fibres
16. List any three analytical variables.
17. Give three examples for antivitamins.
18. Clinical significance of estimation of AFP, CEA and PSA
19. What is detoxification? Give two examples for conjugation.
20. Define mean, sensitivity and Accuracy.
21. List the Westgard rejection rules.
22. How to plot Levey-Jennings control chart?
23. Okazaki fragments

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. (MLT) Degree Examination - 05-Jan-2022

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

MICROBIOLOGY – PAPER III (RS-3)
Q.P. CODE: 3160

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. Classify immunity. Discuss in detail about innate immunity.
2. Classify fungi. Discuss in detail about the pathogenicity and laboratory diagnosis of Aspergillosis.
3. List RNA viruses. Draw a neat labeled diagram of HIV Virus. Describe the pathogenicity and laboratory diagnosis of HIV infection.

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

4. Prophylaxis of Polio
5. Anaphylaxis
6. Mycetoma
7. Pathogenicity and laboratory diagnosis of Dengue fever
8. Structure of immunoglobulin
9. Laboratory diagnosis of Hepatitis B infection
10. Laboratory diagnosis of Histoplasmosis
11. Definition and mechanism of Autoimmunity

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

12. Germ tube test
13. Super antigens
14. Name three antifungal agents.
15. Define Antigenic shift in influenza virus.
16. Name three genera of Dermatophytes.
17. Name any three viruses causing Diarrhoea.
18. Define adjuvant. Give two examples for adjuvant.
19. Name three oncogenic viruses.
20. Morphology of Rhizopus
21. Negri bodies
22. Name three antigen-antibody reactions.
23. Memory cells

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. (MLT) Degree Examination - 07-Jan-2022

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

PATHOLOGY – PAPER - III (RS3)
Q.P. CODE: 3161

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. List the components prepared from whole blood. Discuss in detail the preparation, storage and uses of each of them.
2. Discuss various chromosomal banding techniques.
3. Describe the processing of body fluids in the cytology lab. Add a note on MGG staining.

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

4. Normal histology and cytology of salivary glands.
5. Procedure of Papanicolaou stain.
6. Procedure of blood collection in the blood bank.
7. Discuss procedure for preparation of cell block.
8. Biomedical waste disposal in blood bank.
9. Down's syndrome.
10. Equipments used in Karyotyping laboratory.
11. Liquid Based Cytology.

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

12. Give three examples for autosomal recessive diseases.
13. Spray fixatives.
14. Image analysis.
15. Bronchoalveolar lavage.
16. Transfusion transmitted infections.
17. Use and care of microscope.
18. Platelet concentrate.
19. Bombay blood group.
20. Du test.
21. Samples used for karyotyping.
22. List three advantages of FNAC.
23. List the hormonal indices in cervical cytology.

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. (MLT) Degree Examination - 05-Jul-2022

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. Give the sources and RDA of Calcium. Explain the metabolism of Calcium. Add a note on precautionary measures while estimating serum calcium levels.
2. Explain the steps β-oxidation of palmitic acid. Discuss the energetics.
3. What are iso-enzymes? Explain in detail, the two isoenzymes and their applications in clinical diagnosis.

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

4. Give the principle and procedure of flame photometry.
5. What is a quality control material? Write the procedure to prepare the quality control material prepared in-house.
6. Explain the transport of ABG sample. Name the equipment and important parameters analysed. Explain the precautionary measures before analyzing the sample.
7. Classify and explain the point mutations. Add a note on the AMES test.
8. What are Acute Phase proteins? Describe the role of ceruloplasmin and the genetic disorder associated with it.
9. Explain the experiment to confirm semi-conservative type of DNA replication.
10. Discuss the tumour markers – CA – 125 and PSA.
11. Explain the procedural steps of Agarose gel electrophoresis.

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

12. Westgard rules
13. Explain the unit of enzyme activity with an example.
14. List the biochemical functions of Vitamin E.
15. Purpose of POCT in a Hospital setting. Give one example of POCT and mention its use.
16. Significance of HMP pathway
17. **What is BMR? Explain the factors affecting the same.**
18. How are renal calculic produced? Give the qualitative procedure of any two analytes.
19. Vitamin A
20. List out the tests under live panel and lipid profile.
21. Functions of Chloride
22. Clinical utility of pancreatic juice
23. Renal regulation of blood pH

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. (MLT) Degree Examination - 07-Jul-2022

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

MICROBIOLOGY - PAPER III (RS-3)
Q.P. CODE: 3160

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. Write the morphology of HIV virus. Write in detail the laboratory diagnosis of HIV infections.
2. Describe and classify Hypersensitivity. Describe in detail about Type IV Hypersensitivity.
3. Describe etiology pathogenicity and laboratory diagnosis of candidiasis.

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

4. Precipitation reactions.
5. Acquired immunity.
6. Cyto pathogenic effect of virus.
7. Laboratory diagnosis of Dermatophytes.
8. Laboratory diagnosis of Dengue.
9. Cryptococcus.
10. Post exposure prophylaxis of Rabies.
11. Immunofluorescence test.

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

12. What are sclerotic bodies?
13. Name three viruses causing viral meningitis.
14. Morphology of Rhizopus.
15. Morphology of Influenza virus.
16. Graft vs host reaction.
17. Zika virus.
18. MMR vaccine.
19. Define Heterophile agglutination test and give examples.
20. Lacto phenol cotton blue mount.
21. Name three viruses causing diarrhoea.
22. Name three dimorphic fungi.
23. Sabourauds dextrose Agar.

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. (MLT) Degree Examination - 11-Jul-2022

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

PATHOLOGY – PAPER - III (RS3)
Q.P. CODE: 3161

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 is the principle of FISH? Explain the use of this technique in cytogenetics.
2. Describe the various blood transfusion reactions and the work up for the same.
3. Discuss in detail about processing of various body fluids for cytology.

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

4. Bethesda system of reporting cervical cytology.
5. Enumerate the reasons for pale and dark nuclear staining in PAP smears.
6. Principle and procedure of GTG banding.
7. Describe the FNAC technique. Mention its advantages and disadvantages.
8. What is reverse blood grouping? What are its advantages?
9. List the Blood components and their methods of preparation and storage.
10. Coomb's test.
11. Cytology of CSF and its in differential diagnosis of meningitis.

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

12. Shorr's stain.
13. HSIL cytology.
14. Role of Urine cytology in transplant patients.
15. Barr body.
16. Name the equipments used for tissue culture.
17. Name three transfusion transmitted infections.
18. Name the types of administrative organisation of blood banks in India.
19. Rh incompatibility.
20. Clinical significance of testing for HLA antigens.
21. Automation in Cytology.
22. Explain briefly X-linked inheritance with examples.
23. Techniques of specimen collection for cervical cytology.

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