Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. (MLT) Degree Examination - March - 2018

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

Biochemistry – Paper III (RS-3 Scheme)

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. Define variables. Write a note on pre-analytical, analytical and post analytical variables.
2. Define Electrophoresis. Explain the factors affecting electrophoresis. Describe briefly the procedure of Agarose Gel Electrophoresis.
3. Define Urolithiasis. Write a note on theory of formation and analysis of renal and gall stones.

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

4. HMP shunt pathway and its significance
5. Wald's visual cycle and clinical manifestation of vitamin A
6. Ion selective electrode
7. Jaundice
8. Factors affecting Recommended Dietary Allowances (RDA)
9. Disorders of acid base imbalance.
10. Transcription
11. Explain the formation of ketone bodies.

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

12. Blood gas analysis
13. Iso enzymes
14. CA – 125
15. Excretion of Cholesterol
16. Uronic acid pathway
17. Composition and functions of pancreatic juice
18. Tyroxine
19. Flame photometry
20. Cardiac troponin
21. Normal values (a) Calcium (b) Sodium (c) Potassium
22. Rickets
23. Acute phase proteins

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. (MLT) Degree Examination - MARCH-2018

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

Microbiology – Paper III (RS-3 Scheme)

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. Enumerate the Antigen-antibody reactions. Explain the principle, procedure and application of ELISA.
2. Name the opportunistic mycosis. Explain candidiasis in detail.
3. Classify the human herpes viruses. Give a detail account of herpes simplex virus.

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

4. Laboratory diagnosis of viral infections
5. Hepatitis A virus
6. Cytopathic effects
7. Blastomycosis
8. Major histocompatability complex
9. Ig G
10. Monoclonal antibodies
11. Biological effects of complement

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

12. Name any three viruses causing Haemorrhagic fever.
13. Name six antifungal agents.
14. Carriers
15. Herd immunity
16. Contact dermatitis
17. Graft versus host reactions
18. Negri bodies
19. Pulse polio vaccination
20. Draw a neat diagram of HIV. Name the antigens.
21. Name the dermatophytes with a neat diagram.
22. Type III Hypersensitivity
23. Natural killer cells

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. (MLT) Degree Examination - MARCH-2018

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

Pathology – Paper III (RS-3 Scheme)

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. Mention donor selection criteria in detail.
2. List cytological fixatives. What is spray fixation? Describe the technique of preparation of smear for staining after spray fixation.
3. Mention stains used in fine needle aspiration smears. Write the principle and procedure of May Grunwald Giemsa stain.

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

4. Automation in cytology
5. Blood containers and anticoagulants used in blood banking
6. Transfusion reaction
7. Cytology of squamous cell carcinoma of Cervix
8. Describe ABO blood grouping methods
9. Autologous transfusion
10. Cross matching techniques
11. Preparation of smears and fixatives used in Bronchial washings.

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

12. Principle of Papanicolaou stain
13. Significance of Rh blood group
14. Cytology of bacterial meningitis
15. Platelet concentrate – shelf life and storage condition
16. What is image analysis?
17. List blood components.
18. What is tissue culture?
19. Principle of direct's Coomb's test
20. What is karyotyping?
21. What is the use of inverted microscope?
22. List three transfusion transmitted diseases.
23. List two infections diagnosed by Pap smear.

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. (MLT) Degree Examination - SEP-2018

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

Biochemistry – Paper III (RS-3 Scheme)

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, source, absorption, functions and clinical manifestations of Vitamin D.
2. Write a note on β oxidation and its energetics.
3. Explain the formation of bilirubin. Write a note on Jaundice.

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

4. AFP (alpha feto protein)
5. Semi conservative DNA replication
6. Atomic absorption Spectrophotometry
7. Diagnostic and prognostic use of cardiac markers. Write its laboratory evaluation.
8. Calcium absorption and metabolism
9. Nutritional importance of carbohydrates
10. Renal regulation of Acid-base balance
11. HMP shunt pathway and its significance

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

12. Albumin
13. Post analytical variable
14. Metabolic acidosis
15. Amylase and lipase
16. Point of care testing
17. T_3 and T_4
18. Mutation
19. Anti vitamins
20. Acute phase proteins
21. Coronary artery disease
22. Vitamin E
23. Isoenzymes

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III Year B.Sc. (MLT) Degree Examination - SEP-2018

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Microbiology – Paper III (RS-3 Scheme)

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 fungi. Discuss in detail about pathogenicity and laboratory diagnosis of Aspergillosis.
2. Define and classify Hypersensitivity. Describe in detail about Type I Hypersensitivity.
3. Classify Picorna viruses. Describe the laboratory diagnosis and Prophylaxis of Poliomyelitis.

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

4. Pathogenecity and laboratory diagnosis of Cryptococcus neoformans
5. Inclusion bodies
6. Prophylaxis of Rabies
7. Cultivation of viruses
8. Principles and applications of Enzyme linked immunosorbant Assay (ELISA)
9. Slide culture technique
10. Pathogenicity and laboratory diagnosis of Pneumocystosis
11. Active immunity

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

12. Pathogenicity of Varicella Zoster virus (VZV)
13. Name 3 arboviral infections
14. Name 3 DNA Viruses
15. Serological markers of hepatitis B virus
16. Name 3 Viral haemorrhagic fever
17. Germ tube technique
18. Rota virus
19. Name 3 media used in cultivation of fungus
20. Clinical manifestations of Candida albicans (name any three)
21. Morphology of Rhizopus
22. Morphology of Influenza virus
23. Radio immunoassay

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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. Define Karyotype. Describe the procedure of Karyotyping of Malignant tumour.
2. Name various cytological indices. Describe normal cytology of female genital tract.
3. How do you investigate a case of blood transfusion reactions?

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

4. Methods of collection of PAP smear
5. Monoclonal antibodies
6. Fixative used in Chromosomal study
7. Cytological examination of sputum
8. Blood bags
9. Blood components – preparation, shelf life and storage temperature
10. Quality control in blood bank
11. Chromosomal and DNA content of cells

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

12. Rh factor
13. Oncogenes
14. May-Grunwald Giemsa stain
15. Colchicine
16. Identification of sex chromatin
17. Care of microscope
18. Describe mesothelial cells.
19. CSF cell count
20. Anticoagulants in blood bank
21. Cytofixatives
22. Normal cell structure
23. Preparation of cell block

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