Rajiv Gandhi University of Health Sciences, Karnataka

Third year B.Sc. (M.L.T) Degree Examination – Feb/March 2011

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

MICROBIOLOGY – III (Revised Scheme)

Q.P. CODE: 1610

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 morphology, laboratory diagnosis and prophylaxis of Hepatitis B infection
2. Classify immunity. Discuss innate immunity
3. Classify fungi & write in detail on Dermatophytes

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

4. Atopy
5. Prophylaxis against poliomyelitis
6. Cytokines
7. Ebstein barr virus
8. Classification of subcutaneous mycotic fungi
9. Cryptococcus neoformans
10. Dengue fever
11. Rubella
12. Graft viruses host reaction
13. Bacteriophage

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

14. ELISA
15. Local immunity
16. Morphology of HIV
17. Immunoglobulins
18. Cell culture
19. Major histo compatibility antigens
20. Mycotoxin
21. Oncogenic viruses
22. Enumerate under myxo group viruses
23. Asperigillosis

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Rajiv Gandhi University of Health Sciences, Karnataka

Third year B.Sc. (M.L.T) Degree Examination – Feb/March 2011

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

PATHOLOGY – III (Revised Scheme)

Q.P. CODE: 1609

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 method of collection of specimen from female genital tract for hormonal cytology and cervical malignancy
2. Describe P A P (Peroxidise and antiperoxidase) technique, its principle and procedure
3. Name different components of blood and write in brief preparation of FFP and cryoppt

SHORT ESSAYS **8 x 5 = 40 Marks**

4. ABO system
5. Screening of blood before transfusion
6. Fluorescent reactions
7. Sex chromatin demonstration
8. Co_2 incubator
9. Enzymatic digestion of tissues
10. Anatomy and cytology of respiratory tract
11. Anatomy and histology of breast

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

12. Uses of microscope
13. MGG stain
14. Cytological indices of female genital tract
15. Anatomy of gastrointestinal tract
16. Cytological feature of malignant and non malignant effusions
17. Image analysis
18. Name two types of dry heat sterilization
19. Write coagulants used in blood bank
20. Anti – coagulants used in blood bank
21. Cross – matching in blood bank

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Rajiv Gandhi University of Health Sciences, Karnataka

Third Year B.Sc. (M.L.T) Degree Examination – Feb/March 2011

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

PATHOLOGY - III
(RS-2)

Q.P. CODE: 2903

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 methods of collection of samples for cervical cytology and hormonal cytology
2. Describe transfusion reactions and how will you investigate of adverse reaction
3. Write about different components of blood and explain preparation of platelet concentrates

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

4. Laminar air flow
5. Chromosomal and DNA content of the cells
6. Sex chromatin identification
7. Anatomy and histology of urinary tract
8. Differences between benign and malignant tumours
9. FNAC- advantages and disadvantages
10. Fluorescent reactions
11. Autologous transfusion

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

12. MGG stain
13. Cytology of malignancy of respiratory tract
14. Image analysis
15. Inverted microscope
16. Classification and nomenclature of human chromosome
17. HLA antigen
18. Anti – coagulants in blood bank
19. FFP
20. Name two conditions where lymphocytes predominate in pleural fluids
21. Collection of fluid from respiratory tract
22. Name three immunological properties of cells
23. Name three transfusion transmitted diseases

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Rajiv Gandhi University of Health Sciences, Karnataka

Third year B.Sc. (M.L.T) Degree Examination – Feb/March 2011

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

BIOCHEMISTRY – III (Revised Scheme)

Q.P. CODE: 1611

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 trace elements of our body, their source, requirement and deficiency effects. Write about calcium metabolism
2. Write the liver function tests and its use in diagnosis of jaundice. Mention the role of liver enzymes
3. What are the biochemical investigations done in chronic renal failure? Write in detail about creatinine clearance test

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

4. Fractional test meal
5. Acidosis & alkalosis
6. Low density lipoprotein cholesterol
7. Enzymes in myocardial infarction
8. Ketone bodies
9. Uric acid
10. Blood buffers
11. Radio immunoassay
12. Radio active decay
13. Batch analyzer

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

14. Calcium oxalate
15. Stable isotopes
16. Albinism
17. Amon gap
18. Specific gravity
19. Hypokalemia
20. Errors
21. Hay's test
22. Difference between precision and accuracy
23. Micropipette

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Rajiv Gandhi University of Health Sciences, Karnataka

Third year B. Sc. (M.L.T) Degree Examination – Feb/March 2011

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

MICROBIOLOGY – III (RS-2)

Q.P. CODE: 2902

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. Classify immunity. Describe acquired immunity in detail.
2. Give a detailed account of antimicrobial sensitivity testing. Describe disc diffusion technique.
3. List out the organisms causing pyogenic meaningitis. Describe the morphology and cultural characteristics of Streptococcus pneumonia. Add a note on the laboratory diagnosis of acute pyogenic meningitis.

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

4. Differences between T cells and B cells
5. IgG
6. Anaphylaxis
7. Mechanism of autoimmunity
8. Coagulase test
9. Laboratory diagnosis of enteric fever
10. Standard tests for Syphilis
11. Prophylaxis for Diphtheria

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

12. Explain subunit vaccine and give examples.
13. Natural killer cells
14. anamnestic response
15. Allograft
16. Name haemolytic autoimmune diseases
17. Anergy
18. Staphylococcal Scalded Skin Syndrome
19. Malignant pustule
20. Name three clostridia causing Gas gangrene
21. Significant bacteriuria
22. Concentration technique for sputum
23. Scrub typhus

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Rajiv Gandhi University of Health Sciences, Karnataka

Third year B. Sc. (M.L.T) Degree Examination – Feb/March 2011

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

BIO-CHEMISTRY – III (RS-2)

Q.P. CODE: 2901

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. What is metabolic acidosis? Enumerate its causes. What are the compensatory mechanisms?
2. Describe the metabolic fate and functions of methionine and cysteine
3. Explain the mechanism of HCL synthesis in stomach. Add a note on total and free acidity.

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

4. Structural classification of protein
5. Write a note on enzyme markers of liver disease
6. Phenylketonuria
7. ELISA
8. Explain the diseases associated with iron metabolism
9. Explain the process of DNA replication
10. Write a note on different units of radioactivity
11. What are the important substances derived from glycine

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

12. Fractionation of doses.
13. Isoenzymes of ALP
14. Bromosulfthalein test
15. Benedict's test
16. Anion gap
17. Primary structure of protein
18. Bronze diabetes
19. What are the urinary findings in jaundice?
20. Immunofluorescence
21. List the biological actions of glutathinone
22. Mention the factors influencing iron absorption
23. Mention the normal levels of: a)Calcium b) Bilirubin c) Potassium

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. (M.L.T) Degree Examination – Aug / Sep 2011

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

PATHOLOGY - III
(RS-2)

Q.P. CODE: 2903

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 criteria for selection of blood donor and method of collecting the blood.
2. Describe the principle and staining technique of Pap stain
3. Describe characterization of human chromosomes by various banding techniques

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

4. Cytological fixatives
5. Anatomy, histology and cytology of female genital tract
6. Flow cytometry
7. Preservation of immoratilised cell lines
8. ABO and Rh system
9. Coomb's test
10. Cryoppt
11. CO_2 incubator

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

12. Shorr's stain
13. Cytology of malignant conditions in urinary tract
14. Anatomy and histology of thyroid gland
15. Image analysis
16. Enzymatic digestion of tissue
17. Name two biomarkers in cells
18. Name tissues used in karytotype analysis
19. Fluorescent reactions
20. Bombay 'O' group and subgroups of A
21. Blood containers and storage of blood
22. Name three transfusion reactions
23. Sputum examination for AFB

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. (M.L.T) Degree Examination – Aug / Sep 2011

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

BIO-CHEMISTRY – III (RS-2)

Q.P. CODE: 2901

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. Mention the different functions of liver. Explain the test to detect bilirubin in serum
2. Define radioactivity. Explain in detail the different application of radio isotopes
3. Define clearance test. Explain any one of them.

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

4. Functional classification of protein.
5. Hartnup's disease
6. Polymerase Chain Reaction
7. Urine acidification test
8. Classify proteinuria. Explain any one test to detect proteins in urine.
9. Metabolic acidosis
10. Radioimmunoassay
11. Henderson Hasselbach's equation

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

12. Mention the tests based on the synthetic functions of liver.
13. Achlorohydria
14. Respiratory regulation of pH
15. Cardiac troponins
16. Define Curie and Rontgen
17. Immunofluorescence
18. Anior gap
19. Hemosiderosis
20. Composition of renal stones
21. Hyperoxaluria
22. Mention the organic constituents of normal urine.
23. Glutathione

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. (M.L.T) Degree Examination – Aug / Sep 2011

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

PATHOLOGY – III (Revised Scheme)

Q.P. CODE: 1609

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 collection of material for screening of cervical cancer. Describe the cytologic features in various grades of cervical dysplasia
2. What is blood banking? Write a note on autologous blood transfusion
3. Describe the various equipments and their utility in tissue culture studies

SHORT ESSAYS **8 x 5 = 40 Marks**

4. Quality control in histopathology
5. Preparation, procedure and use of May-Grunwald Giemsa stain
6. Fine needle aspiration cytology
7. How do you investigate a case of transfusion reaction?
8. Bethesda system in cytology
9. Difference between normal and malignant cell
10. Write a note on flow cytometry
11. Maturation index

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

12. Mention any four changes that occurs in stored blood
13. Colchicine – What is it? Where is it used?
14. Name four rare blood group systems
15. Oncogenes
16. Fluorescence reactions
17. Barr body
18. Selection criteria of blood donor
19. Normal histology of small intestine
20. Bombay blood group
21. Principle of plasmapharesis

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Rajiv Gandhi University of Health Sciences, Karnataka

III year B.Sc. (M.L.T) Degree Examination – Aug / Sep 2011

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

MICROBIOLOGY – III (RS-2)

Q.P. CODE: 2902

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. Classify Clostridium. Describe the morophology, cultivation, pathogenicity and laboratory diagnosis of Clostridium tetani
2. Enumerate the organisms causing enteric fever. Describe the morphology, cultivation, pathogenicity and laboratory diagnosis of salmonella typhi. Add a note on its prophylaxis.
3. Define autoimmunity. Describe the mechanisms of autoiummunity. Give an account of auto immune disorders

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

4. Describe the mechanism of innate immunity
5. Describe the role of CD_4 lymphocyte in immunity response
6. Describe the processing and presentation of antigens
7. Anaphylaxis
8. Virulence factors of Staphylococcus aureus
9. Clinical manifestations and laboratory diagnosis of Neisseria gonorrhoeae
10. Diarheagenic E.coli
11. Satellitism

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

12. Toxoids
13. Immune tolerance
14. Plasma cells
15. Describe the functions of IgA
16. Actve Rheumatic fever
17. Quellung's reaction
18. Active immunization for diphtheria
19. Malignant pustule
20. Nagler's reaction
21. Name three species of Klebsiella
22. VDRL test
23. Name any three organisms causing urinary tract infections

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Rajiv Gandhi University of Health Sciences, Karnataka

III year B.Sc. (M.L.T) Degree Examination – Aug / Sep 2011

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

BIOCHEMISTRY – III (Revised Scheme)

Q.P. CODE: 1611

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 glycine metabolism. Add a note on bidogically important compounds derived from glycine
2. Describe the causes & mechanism of formation of renal calculi. Outline the qualitative tests used to assess calculi
3. What is the normal blood level of calcium? What is the mechanism by which calcium homeostasis is maintained

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

4. Write a short note on Quality control
5. Short one on micro techniques
6. Enzymes used to assess liver function
7. Write the therapeutic application of radioisotopes
8. Name the renal clearance tests. Give details of any one of them
9. Metabolic acidosis
10. Immunoassay
11. Functions of gastric juice. Define free & total acidity of gastric juice
12. What are iso-enzymes? Give examples
13. Urea cycle

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

14. Standard deviation
15. Function of copper
16. Stable isotopes
17. Biochemical functions of iodine
18. Reference ranges of (A) Total protein & (B) Albumin
19. Phenyl ketonuria
20. Normal serum levels of (A) Sodium & (B) Potassium
21. Respiratory acidosis
22. Alkaline phosphatase
23. Achlorohydria

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. (M.L.T) Degree Examination – Aug / Sep 2011

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

MICROBIOLOGY – III (Revised Scheme)

Q.P. CODE: 1610

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 morphology, laboratory diagnosis of HIV. Add a note on standard precautions
2. Discuss the structure and function of Immunoglobulin 'G'. Write briefly on Immunoglobulin 'A'
3. Enumerate species of candida. Discuss candida albicans

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

4. Anaphylaxis
5. Prophylaxis against measles
6. Monoclonal antibodies
7. Molluscum contagiosum
8. Dimorphic fungi
9. Hepatitis C virus
10. Japanese 'B' encephalitis
11. Chromoblastomycosis
12. Differences between passive and active immunity
13. Cell culture

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

14. Coomb's test
15. Cytopathic effect (CPE)
16. Inclusion bodies
17. 2 examples of live attenuated vaccines
18. Varicella zoster
19. Immunological surveillance
20. Classification of dermatophytes
21. Auto immune diseases
22. Aseptic meningitis
23. Mycetoma

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