Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. (Allied Health Sciences) Degree Examination - Mar 2013

Time: Three Hours | Max. Marks: 80 Marks

BIOCHEMISTRY (RS-2)

(MLT, O.T. Technology, Cardiac Care Technology, Perfusion Technology, Neuro Sciences Technology, Renal Dialysis Technology, Respiratory Care Technology, Medical Imaging Technology & Radiotherapy Technology)

Q.P. CODE: 1228

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. Basic principles and estimation of electrolytes, with sodium regulation and water balance
2. What is chemical balance? Describe types of chemical balance and it's uses
3. Write a note on centrifuge.

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

4. Water of crystallization
5. Liver function tests
6. Metabolic Alkalosis
7. Arrehenius concept of acids and bases
8. Nutritional importance of proteins
9. Basal metabolic rate
10. Specimen collection
11. Fat soluble vitamins

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

12. Pre analytical variables
13. Molecular weight
14. Bicarbonate buffer
15. Borosilicate glass and significance
16. Calorific value
17. Benedict's test
18. Accuracy
19. Indicator
20. Urinary calculus
21. Bicarbonate buffer
22. Dessicator
23. Dalton's theory

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PHYSIOLOGY – RS-2

(MLT, O.T. Technology, Cardiac Care Technology, Perfusion Technology, Neuro Sciences Technology, Renal Dialysis Technology, Respiratory Care Technology, Medical Imaging Technology & Radiotherapy Technology)

Q.P. CODE: 1227

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. Explain the mechanism of negative feed-back mechanism in hormonal regulation using an example.
2. Write the composition of plasma describe the functions of plasma proteins.
3. Define synapse. Draw a labeled structure of the synapse and discuss any three properties.

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

4. Discuss the action of insulin on the target cells.
5. Describe the chemical regulation of respiration.
6. Define immunity. Briefly describe the types of immunity
7. Discuss how water is reabsorbed in different parts of renal tubules.
8. Enumerate the functions of hypothalamus.
9. Tabulate the differences between I and II heart sounds.
10. Explain the counter-current mechanism of kidney.
11. Explain the types of blood transfusion.

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

12. What is MCV? Give its normal value.
13. Functions of the hormone ADH.
14. Define chronaxie and rheobase.
15. List the functions of RBC.
16. Define a sarcomere with the help of a diagram.
17. Define reflex action.
18. Draw a labeled diagram of the pyramidal pathway.
19. What is EEG? Mention its normal waves.
20. Trace the pathway for pain sensation.
21. Draw labeled diagrams of Eosinophil. Specify its functions.
22. Functions of CSF.
23. Draw the label the ECG waves and give the cause for each.

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Time: Three Hours | Max. Marks: 80 Marks

PATHOLOGY (RS-2)

(Clinical Pathology & Heamatology & Blood Banking)

(MLT, O.T. Technology, Cardiac Care Technology, Perfusion Technology, Neuro Sciences Technology, Renal Dialysis Technology, Respiratory Care Technology, Medical Imaging Technology & Radiotherapy Technology)

Q.P. CODE: 1229

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 various anticoagulants used in hematology. List the advantages, disadvantages and mode of actions of each of them.
2. What is fixative? Write about the features of an ideal fixative. Name two commonly used fixatives and lists their mode of actions, advantages and disadvantages.
3. Name the various methods of collection of urine. Explain in detail the microscopic examination of urine.

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

4. Tests to detect completion of decalcification
5. Steps to hasten tissue processing
6. Describe briefly paraffin impregnation in processing a tissue sample.
7. Tests for blood in urine
8. CSF findings in tuberculosis meningitis
9. Prothrombin time
10. Blood grouping and Rh typing
11. Estimation of ESR

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

12. Leukhart's "L" block.
13. Decalcifying agents
14. Chyluria
15. Bence-Jones protein
16. Methods of Hb estimation
17. Causes of polyuria
18. Name four abnormal forms of spermatozoa.
19. Name two bile stained ova in stool.
20. Types of mountants
21. Name the instruments used in grossing.
22. Bouins fixative
23. Types of microtomes

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Time: Three Hours Max. Marks: 80 Marks

MICROBIOLOGY (RS-2)

(MLT, O.T. Technology, Cardiac Care Technology, Perfusion Technology, Neuro Sciences Technology, Renal Dialysis Technology, Respiratory Care Technology, Medical Imaging Technology & Radiotherapy Technology)

Q.P. CODE: 1230

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 antigen antibody reactions. Discuss precipitation reactions in detail.
2. List the aetiological agents of human malaria. Discuss the laboratory diagnosis of falciparum malaria in detail
3. Define sterilization. Discuss in detail the principle, design, operation and monitoring of the autoclave.

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

4. Pasteurization
5. Laboratory diagnosis of gonorrhoea
6. CAMP test
7. Cultivation of viruses
8. Opportunistic fungal infections
9. Malignant pustule
10. Laboratory diagnosis of cholera
11. Hepatitis B virus

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

12. Enriched Media with examples
13. Slide culture for fungus
14. Disposal of sharps
15. L Forms
16. Collection of Blood for culture
17. Catalase test
18. List three tapeworms infecting humans
19. Cysticercus cellulosae
20. WIDAL test
21. List three agents causing nosocomial infections
22. Stormy clot reactions
23. Mantoux test

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