

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)



B.Sc. Allied Health Sciences First Year Semester-II
September 2024 Examination

Time: 2.30 Hrs.

[Max. Marks: 80]

SUBJECT: BIOCHEMISTRY

Q.P Code: J2030

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

LONG ESSAY

2 X 10 = 20 Marks

1. What is Ethics? Explain code of Ethics for a laboratory technician. How will it maintain quality and integrity in a Laboratory.
2. What are the various types of Laboratory balances. Give their use, procedure care and maintenance.

SHORT ESSAY (Answer any Six)

6X 5 = 30 Marks

3. Explain different types of Acids & Bases Theories.
4. Explain the various benefits of biomedical waste management
5. Explain the various safety rules to be followed in a laboratory
6. Draw and briefly explain the use of the following 1. Conical flask 2. Burette 3. Funnel 4. Measuring cylinder 5. Tripod stand
7. Explain procedure, sites and steps for collecting Capillary blood sample
8. Discuss storage and handling of corrosive, flammable and carcinogenic chemicals with safety measures
9. Give the principle of Centrifugation. Explain various types of centrifuges
10. Write the principle, procedure, use and maintenance of pH meter.

SHORT ANSWERS (Answer any Ten)

10 X 3 = 30 Marks

11. Define buffer and mention its applications.
12. Post analytical errors.
13. Preparation of Normal Saline.
14. Define pH. What is normal blood pH
15. Levey Jennings chart.
16. What is meant by Normality, Molarity and % concentration. Give examples
17. Differentiate between concentration and strength of acids
18. Define Mean and Standard deviation. Illustrate with examples
19. Draw a titration curve of a strong acid vs a strong base
20. Define Conventional units and S.I. Units. Write S.I. Units for any two parameters.
21. Accuracy and precision.
22. Coefficient of variance and its significance



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)

B.Sc. Allied Health Sciences First Year Semester-II
September 2024 Examination

Time: 2.30 Hrs.

[Max. Marks: 80]

SUBJECT: PATHOLOGY

Q.P Code: J2050

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

LONG ESSAY

2x10=20

1. Discuss the various cellular adaptations with examples for each.
2. Define inflammation. List the cardinal signs of inflammation. describe chronic inflammation with its lab tests.

SHORT ESSAY (Answer any Six)

6x5=30

3. Blood grouping and Rh typing
4. Meningitis
5. Write the difference between benign and malignant tumour
6. What is FNAC. List the advantages and stains used in cytology
7. Define leukaemia. Discuss the causes for leucocytosis
8. What are the different methods of blood collection modes
9. Discuss Briefly about breast carcinoma
10. Collection and physical examination of urine

SHORT ANSWERS (Answer any Ten)

10x3=30

11. Mention three causes of meningitis
12. Mention three cellular adaptations
13. Hyperplasia
14. List three causes for lung cancer
15. Enumerate the types of shock
16. Prothrombin time
17. Rother's test
18. Role of CSF in meningitis
19. Mention three examples for chronic inflammation
20. List the risk factors for thrombosis
21. List the types of urinary calculi
22. What is pneumonia



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)

B.Sc. Allied Health Sciences First Year Semester-II
September 2024 Examination

Time : 2.30 Hrs.

[Max. Marks : 80]

SUBJECT : BIOCHEMISTRY

Q.P Code: K2030

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary

LONG ESSAY

2 X 10 = 20 Marks

1. What is Ethics? Explain code of Ethics for a laboratory technician. How will it maintain quality and integrity in a Laboratory.
2. What are the various types of Laboratory balances. Give their use, procedure care and maintenance.

SHORT ESSAY

6 X 5 = 30 Marks

3. Explain different types of Acids & Bases Theories with examples.
4. Explain the various benefits of biomedical waste management
5. Explain the various safety rules to be followed in a laboratory
6. Draw and briefly explain the use of the following 1. Conical flask 2. Burette 3. Funnel 4. Measuring cylinder 5. Tripod stand
7. Explain Tourniquet application and its importance
8. Explain procedure, sites and steps for collecting Capillary blood sample

SHORT ANSWERS

10 X 3 = 30 Marks

9. Post analytical variables
10. Define and give the mechanism of action of an Indicator
11. Differentiate between random and systematic errors
12. Types of specimens in urine collection
13. What are the various water grades and their use
14. Storage of flammable and corrosive chemicals
15. Uses of Buffers
16. Give the use of 1. Cold box 2. Water bath 3. Reflux condenser
17. Three tests using blood sample collected in EDTA tube
18. Accuracy, Precision, Sensitivity

* * *



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)

B.Sc. Allied Health Sciences First Year Semester-II
September 2024 Examination

Time: 2.30 Hrs.

[Max. Marks: 80]

SUBJECT: MICROBIOLOGY

Q.P Code: K2040

*Your answers should be specific to the questions asked.
Draw neat labelled diagrams wherever necessary.*

LONG ESSAY:

2 X 10 = 20 Marks

1. Describe the source, modes of transmission, clinical features with mapping of lesions on Human diagram, complications and samples to be collected in Typhoid fever.
2. Describe the source, modes of transmission, clinical features with mapping of lesions on Human diagram and samples to be collected in Dengue fever.

SHORT ESSAY:

6 X 5 = 30 Marks

3. Describe the principle, procedure, sterilization condition, uses and controls of Hot air oven.
4. Describe Biomedical waste management.
5. Map the lesions of *Staphylococcus aureus* with a diagram of Human body.
6. Describe the source, mode of transmission, clinical features and samples to be collected in Rabies
7. Describe the source, mode of transmission, clinical features and samples to be collected in Aspergillus.
8. Describe the source, mode of transmission, clinical features and samples to be collected in Malaria.

SHORT ANSWERS:

10 X 3 = 30 Marks

9. Name three clinical manifestations in Pneumococci infection.
10. Describe standard precautions in hospital.
11. Draw the diagram of IgM antibody.
12. Enumerate three disinfectants used in hospitals.
13. List any 3 Bacterial vaccines.
14. List the 3 clinical features of Round worm infection.
15. Draw a neat labeled diagram of Bacterial cell.
16. Enumerate three infectious agents spread by blood transfusion.
17. List 3 articles sterilized in Autoclave.
18. Describe the clinical features of Hepatitis B infection.



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)

B.Sc. Allied Health Sciences First Year Semester-II
September 2024 Examination

Time: 2.30 Hrs.

[Max. Marks: 80]

SUBJECT: PATHOLOGY

Q.P Code: K2050

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary

LONG ESSAY

2x10=20

1. Discuss the various cellular adaptations with examples for each.
2. Define inflammation. List the cardinal signs of inflammation. describe chronic inflammation with its lab tests.

SHORT ESSAY

5x6=30

3. Blood grouping and Rh typing
4. Meningitis
5. Write the difference between benign and malignant tumour
6. What is FNAC. List the advantages and stains used in cytology
7. Define leukaemia. Discuss the causes for leucocytosis
8. What are the different methods of blood collection modes

SHORT ANSWERS

10x3=30

9. Mention three causes of meningitis
10. Mention three cellular adaptations
11. Hyperplasia
12. List three causes for lung cancer
13. Enumerate the types of shock
14. Prothrombin time
15. Rother's test
16. Mention three infectious disease
17. Mention three examples for chronic inflammation
18. List the risk factors for thrombosis