



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

**B.Sc. Allied Health Sciences Second Year Semester-III**

**April 2023 Examination**

**B.Sc. Respiratory Care Technology**

**Paper – I**

**[Max. Marks: 100]**

**Time: 3 Hrs.**

**Applied Pathology & Microbiology**

*Your answers should be specific to the questions asked.*

*Draw neat labelled diagrams wherever necessary.*

*(Use separate answer booklet for Section A & B)*

**Section – A**

**Applied Pathology (50 Marks)**

**Q.P Code :J3855**

**LONG ESSAY**

**2 X 10 = 20 Marks**

1. Classify congenital heart diseases and describe the etiology and morphology of atrial septal defect ?
2. Define ischemic heart disease and describe the etiopathogenesis and effects of myocardial ischemia ?

**SHORT ESSAY (Answer any three)**

**3 X 5 = 15 Marks**

3. Define heart failure and describe the etiopathogenesis of heart failure
4. Describe the clinical features, etiology and laboratory findings in hemophilia
5. Describe the etiology and laboratory findings in sickle cell anemia
6. Describe the etiology, clinical features and laboratory findings in iron deficiency anemia
7. Describe the etiopathogenesis and clinical effects of atherosclerosis

**SHORT ANSWERS (Answer any five)**

**5 X 3 = 15 Marks**

8. Classify aneurysms
9. Describe the ECG changes and cardiac markers used in Myocardial infarction
10. List 06 causes of leucocytosis
11. List the RBC indices and their utility
12. List 06 valvular heart diseases
13. Classify cardiomyopathy
14. Classify Acute Lymphoid Leukemia

**Section – B**

**Applied Microbiology (50 Marks)**

**Q.P Code : J3856**

*(Use separate answer booklet for Section-B)*

**LONG ESSAY**

**2 X 10 = 20 Marks**

1. Define biomedical waste; what are the categories of biomedical waste? How will you segregate biomedical waste at source? Add a note on the importance of biomedical waste management. (2+3+3+2)
2. Define and enumerate the various causative agents of catheter associated urinary tract infection. Discuss in detail the predisposing factors and infection control and preventive measures of Catheter associated urinary tract infection (2+2+3+3)

**SHORT ESSAY (Answer any three)**

**3 X 5 = 15 Marks**

3. Risk factors and preventive measures of HIV infection in health care settings
4. What are the precautions to be taken while providing care to a patient on ventilator?
5. How is air quality assessed by active surveillance?
6. List the sources for hospital acquired infections.
7. Role of health care worker in preventing transmission of infection

**SHORT ANSWERS (Answer any five)**

**5 X 3 = 15 Marks**

8. Name three PPE
9. Five moments of hand hygiene
10. Mention the source and mode of transmission of Ventilator associated pneumonia
11. Do's and Don'ts in discarding and disposing the sharps in the hospital
12. List three infections transmitted through direct contact
13. Name three types of health care associated infection
14. What is MRSA? Mention one infection control practice to prevent its cross transmission

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

**B.Sc. Allied Health Sciences Second Year (Semester-III)**

**April 2023 Examination**

**B.Sc. Respiratory Care Technology**

**Time : 2 Hrs.**

**[Max. Marks : 40]**

**Subject : Applied Pharmacology**

**Q.P Code : J3870**

*Your answers should be specific to the questions asked.*

*Draw neat labeled diagrams wherever necessary.*

**LONG ESSAY**

**1 X 10 = 10 Marks**

1. List sympathomimetics. Explain the uses and adverse effects of any three drugs  
(2.5+2.5+2.5+2.5)

**SHORT ESSAY (Answer any three)**

**3 X 5 = 15 Marks**

2. Explain the mechanism of action, uses and adverse effects of neostigmine (2+2+1)
3. Explain the mechanism of action uses and adverse effects of frusemide (1+2+2)
4. Explain mechanism of action, uses and adverse effects of heparin (1.5+2+1.5)
5. List the properties of ideal plasma expander and write the uses of crystalloids (3+2)

**SHORT ANSWERS (Answer any five)**

**5 X 3 = 15 Marks**

6. List three uses and three adverse effects of losartan
7. Write the treatment for organophosphorus compound poisoning
8. List three uses and three adverse effects of nitrates
9. Write the treatment for myocardial infarction
10. Define bioavailability and plasma half-life with examples
11. List three differences between oral and intravenous route of drug administration

\*\*\*\*\*



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

**B.Sc. Allied Health Sciences Second Year (Semester-III)**  
**April 2023 Examination**

**B.Sc. Respiratory care Technology**

**Time : 2.30 Hrs.**

**[ Max. Marks : 80]**

**PAPER-IV**

**Medicine Relevant to Respiratory care Technology**

**Q.P Code : J3880**

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

**Long Essay**

**2X10=20 Marks**

1. Define sepsis. Explain the SIRS criteria to determine sepsis in a patient. Write the steps of pathophysiology if sepsis.
2. With a neat labelled diagram, explain in detail the pathophysiology of HIV virus. Also mentions the signs and symptoms associated with the disease.

**Short Essay (Answer any Six)**

**6X5=30 Marks**

3. Describe the etiology, signs and symptoms of bronchial asthma.
4. Define ARDS (Berlin ARDS).
5. Define Gullian Barre Syndrome. What are the risk factors causing the disease?
6. Briefly describe the management of organophosphorus poisoning.
7. Define status epilepticus. Mention the risk factors.
8. Briefly describe the pathophysiology of GB syndrome.
9. Mention the types and causes of each respiratory failure.
10. Define COPD. Briefly describe the clinical features associated with the disease.

**Short Answers (Answer any ten)**

**10X3=30 Marks**

11. Mention the signs and symptoms of organophosphorus poisoning.
12. Define bronchial asthma
13. Define bronchitis.
14. Mention the diagnosis of Gullian barre syndrome.
15. Define myasthenia gravis.
16. How do you diagnose ARDS?
17. Mention the chest Xray features of COPD.
18. Mention the clinical features of status epilepticus.
19. Define septic shock.
20. Mention the respiratory problems in children.
21. Mention the different route of administration of poisons.
22. What are the major pathological changes in the pathophysiology of COPD.



**SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH**

**(A DEEMED TO BE UNIVERSITY)**

**B.Sc. Allied Health Sciences Second Year Semester-III**

**April 2023 Examination**

**B.Sc. Respiratory care Technology**

**Time:2.30 Hrs.**

**Paper – I**

**[Max. Marks: 80]**

**Applied Pathology & Microbiology**

*(Use separate answer booklet for Section A & B)*

**Section – A**

**Applied Pathology (40 Marks)**

**Q.P Code : K3795**

*Your answers should be specific to the questions asked.*

*Draw neat labelled diagrams wherever necessary.*

**LONG ESSAY**

**1 X 10 = 10 Marks**

1. Define cardiomyopathy-Definition, types, causes and its pathophysiology

**SHORT ESSAY**

**3X 5 = 15 Marks**

2. Aneurysm – Definition , classification and pathophysiology
3. Classify leucocytes. Describe microscopic morphology of leucocytes with a diagram
4. Pathophysiology of left heart failure

**SHORT ANSWERS**

**5 X 3 = 15 Marks**

5. Causes for mitral valve prolapse
6. Classify hypertension
7. Write three causes for lymphocytosis
8. What is Leukemoid reaction and 3 causes
9. Name the clotting factors

**Section – B**

**Applied Microbiology (40 Marks)**

**Q.P Code : K3796**

*(Use separate answer booklet for Section-B)*

**LONG ESSAY**

**1 X 10 = 10 Marks**

1. Enumerate the microorganisms, risk factors and infection control practises to prevent the infection in health care workers through respiratory route (3+3+4)

**SHORT ESSAY**

**3 X 5 = 15 Marks**

2. Discuss the importance of infection control in ICU
3. List five moments and steps in hand washing
4. Indications and methods of microbiological surveillance and sampling of high-risk areas in health care settings

**SHORT ANSWERS**

**5 X 3 = 15 Marks**

5. Name any three infections transmitted through body fluids
6. Name three multidrug resistant organism
7. Name three infections transmitted through direct contact
8. Mention the Colour coded bins used in biomedical waste management
9. Name three vaccines recommended for health care worker

\*\*\*\*\*



**SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH**

**(A DEEMED TO BE UNIVERSITY)**

**B.Sc. Allied Health Sciences Second Year (Semester-III)**

**April 2023 Examination**

**B.Sc. Respiratory care Technology**

**Paper – II**

**[Max. Marks : 80]**

**Time : 2.30 Hrs.**

**Introduction to Respiratory Care Technology**

**Q.P Code : K3800**

*Your answers should be specific to the questions asked.*

*Draw neat labelled diagrams wherever necessary.*

**LONG ESSAY**

**2 X 10 = 20 Marks**

1. Assessment of Respiratory system
2. Assessment of cardiovascular system

**SHORT ESSAY**

**6 X 5 = 30 Marks**

3. Handwashing
4. Blood pressure
5. Respiration
6. Indication of Chest x ray
7. Neurological Examination
8. Auscultation of respiratory system

**SHORT ANSWERS**

**10 X 3 = 30 Marks**

9. Symptoms of COPD
10. Symptoms of Asthma
11. Defined hypertension
12. Explain about Handwashing
13. Cardiothoracic ratio
14. Write any 3 respiratory diseases
15. Defined Pulsation
16. Write 3 Products of Respiration
17. Defined Hypertension
18. Write Cardiac sounds

**\* \* \***



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

**B.Sc. Allied Health Sciences Second Year (Semester-III)**

**April 2023 Examination**

**B.Sc. Respiratory Care Technology**

**Time : 2 Hrs.**

**[Max. Marks : 40]**

**Subject : Applied Pharmacology**

**Q.P Code : K3810**

*Your answers should be specific to the questions asked.*

*Draw neat labeled diagrams wherever necessary.*

**Long essay**

**1x10=10 Marks**

1. Classify drugs used in hypertension, Explain mechanism of action, uses and adverse effects of angiotensin converting enzyme (ACE)

**Short essay**

**3 x 5 = 15 Marks**

2. Explain mechanism of action, uses and adverse effects of nitrates.
3. Explain mechanism of action, uses and adverse effects of amlodipine
4. Explain the mechanism and uses of Low molecular weight Heparin

**Short answer**

**5 x 3 = 15 Marks**

5. Explain mechanism of action, and uses of streptokinase.
6. Mention three anti-cholinesterase drugs
7. Mention three inhalational anesthetic drugs and their adverse effects
8. Mention three antiplatelet agents with their uses
9. Write the treatment of organophosphate poisoning

\*\*\*\*\*



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

**B.Sc. Allied Health Sciences Second Year (Semester-III)**

**April 2023 Examination**

**B.Sc. Respiratory Care Technology**

**Paper –IV**

**[Max. Marks : 80]**

**Time : 2.30 Hrs.**

**Medicine Relevant to Respiratory Care Technology**

**Q.P Code : K3820**

*Your answers should be specific to the questions asked.*

*Draw neat labelled diagrams wherever necessary.*

**LONG ESSAY**

**2 X 10 = 20 Marks**

1. Defined ARDS
2. Defined Myasthenia Gravis and GBS

**SHORT ESSAY**

**6 X 5 = 30 Marks**

3. Chronic bronchitis
4. Myasthenia gravis
5. Gullizan - Barre Syndrome
6. Respiratory failure
7. AIDS
8. Emphysema

**SHORT ANSWERS**

**10 X 3 = 30 Marks**

9. Write the Chemical formula of Respiration
10. Write 3 Respiratory sounds
11. Write about Insolation procedures
12. General appearance of the Human Body
13. Cardiothoracic ratio
14. Write any 3 respiratory diseases
15. Defined Pulsation
16. Write 3 Products of Respiration
17. Defined Hypertension
18. Write Cardiac sounds

**\* \* \***