

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

B.Sc. Allied Health Sciences Second Year Semester-IV

March 2022 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: J4855

2 X 10 = 20 Marks

LONG ESSAY

1. Describe the findings in nephritic syndrome. Describe the etiopathogenesis, clinical features and morphology of post streptococcal glomerulonephritis
2. Enumerate the differences between obstructive and restrictive pulmonary diseases. Describe the etiopathogenesis, clinical features and morphology of lung in bronchial asthma

SHORT ESSAY (Answer any three)

3 X 5 = 15 Marks

3. Describe the etiopathogenesis, clinical features and morphology of chronic kidney disease
4. Describe the etiopathogenesis, clinical features and morphology of pneumoconiosis
5. Describe the etiopathogenesis, clinical features and morphology of pulmonary edema
6. Describe the etiopathogenesis, clinical features and morphology of acute pyelonephritis
7. Describe the etiopathogenesis, clinical features and morphology of lobar pneumonia

SHORT ANSWERS (Answer any five)

5 X 3 = 15 Marks

8. List 06 causes of obstructive uropathy
9. List the renal function tests with their normal reference ranges
10. Describe the urinary findings in urinary tract infection
11. List 06 causes of pleural effusion
12. Define azotemia and uremia
13. Describe the anatomy of kidney
14. Draw the histology of lung

Section – B

Applied Microbiology (50 Marks)

Q.P Code: J4856

(Use separate answer booklet for Section-B)

2x10= 20marks

LONG ESSAY

1. Describe the factors contributing to infection and measures to control infection in ICU (4+6)
2. Classify sterilization. Describe in detail the working principle of autoclave with a diagram. Name the sterilization controls used (3+7)

SHORT ESSAYS (Answer any three).

3X5=15 marks

3. Enumerate Alcohols used in disinfection. Describe the mechanism of action and uses of Alcohols
4. Describe the significance of Central Sterile Supply Department in Hospital
5. Describe the working principle and uses of Plasma sterilization
6. Describe different methods of cold sterilization with examples
7. Classification of patients care units based on the risk involved and the appropriate methods of disinfection

SHORT ANSWERS (Answer any five).

5X3=15 marks

8. Mention three levels of disinfectants with examples
9. List the factors affecting the effectiveness of chemical disinfectants
10. List three uses of Glutaraldehyde
11. Mention three methods of microbiological surveillance of OT
12. Define and name two antiseptics
13. Mention the methods of sterilization of endoscope, surgical instruments and laryngeal blade
14. Name three types of patient care items in Spaulding's classification with examples



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Paper – II

[Max. Marks: 100]

Introduction to Respiratory care Technology

Q.P Code: J4860

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

I. Long Essay

2x10=20 Marks

1. Describe in details about Nebulization Therapy and various Devices used in it.
2. Describe Humidity Therapy, its indication, Active & Passive humidifiers.

II. Short Essay (Any 10)

10x5=50 Marks

3. Non Rebreather Mask & Partial Rebreather Mask
4. Colour Coding & Sizes for Medical Gas Cylinders
5. Mention the Low flow oxygen delivery devices in short.
6. Postural Drainage techniques and its contraindications
7. Write about spacers and its advantages in Aerosol Therapy.
8. ECG & its Abnormalities
9. Respiratory failure & its types
10. Steps in Interpretation of Chest X ray
11. Initial patient assessments in respiratory therapy
12. Oxygen Concentrators
13. Air compressors & its components
14. Write about Alarms & Safety Devices in Medical gas supply

III. Short answer (any 10)

10x3=30 marks

15. Simple face Mask
16. Indications for Incentive Spirometry
17. HME filter
18. Compressed gas Cylinders
19. Pediatric oxygen delivery devices
20. Complications associated with PFT
21. Venturi Mask
22. Explain about DLCO in PFT
23. Factors affecting aerosol Therapy
24. Disadvantages of PMDI
25. Rationale of oxygen Therapy
26. Role of RT in Nebulization



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Paper - III

[Max. Marks: 40]

Time: 2 Hrs.

Applied Pharmacology

Q.P Code: J4870

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

LONG ESSAY

1 X 10 = 10 Marks

1. Classify insulin preparations. Explain the mechanism of action, uses and adverse effect of insulin (3+2+3+2)

SHORT ESSAY (Answer any Three)

3X 5 = 15 Marks

2. List the preanaesthetic medication and write the basis for the use of each group of drugs (1+4)
3. Explain the mechanism of action, uses and adverse effects of sodium cromoglycate (2+1.5+1.5)
4. List three steroids. Explain steroid card (1.5+3.5)
5. Explain mechanism of action, uses and adverse effects of diclofenac (1.5+2+1.5)

SHORT ANSWERS (Answer any five)

5 X 3 = 15 Marks

6. List the advantages of second generation antihistaminics over first generation
7. Mention three antipseudomonal penicillins and write three uses
8. List three pharyngeal demulcents and write their mechanism of action
9. Explain succinylcholine apnea and write the treatment
10. Mention three immunosuppressants and write three uses
11. List opioid antagonist and write their uses



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Time: 2.30 Hrs.

[Max. Marks: 80]

PAPER-IV

Medicine Relevant to Respiratory care Technology

Q.P Code: J4880

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

Long Essay

2x10=20 Marks

1. Explain about pulmonary Tuberculosis along with its causes, Risk factors, Diagnosis and Management.
2. Describe Acute Lung Injury and its Management.

II. Short Essay (Any 6)

6x5=30 Marks

3. Write a short note on Viral Pneumonia
4. Explain the patient management of toxic inhalation.
5. Explain Pulmonary Edema along with risk factors & Pathophysiology.
6. Define Lung Abscess with its radiological findings
7. Tropical Eosinophilia
8. Write a short note on Pleural effusion and its types.
9. Explain the Characteristics of Immunocompromised patients.
10. Write about common fungal respiratory Infections.

III. Short answer (any 10)

10x3=30 marks

11. Thoracocentesis
12. Role of Respiratory Therapists in Pleural Diseases
13. Types of Chest wall Diseases
14. Silicosis
15. Differentiate between hospital acquired and community acquired Pneumonia.
16. Extra Pulmonary Tuberculosis
17. Pneumonitis
18. Write a Short note on Lung Cancer.
19. Explain the preventive Measures for Hospital acquired Pneumonia.
20. Explain VAP & its Bundle care
21. Management of pulmonary Edema.
22. Symptoms of smoke Inhalation.

