



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

B.Sc. Allied Health Sciences Second Year (Semester- 4th)

September 2024 Examination

B.Sc. Cardiac Perfusion Technology (CPT)

Time: 2.30 Hrs.

[Max. Marks:80]

Applied Pathology & Microbiology

(Use Separate answer booklet for Section A & B)

(SECTION A)

APPLIED PATHOLOGY (40 Marks)

Q.P Code: K4745

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

Long Essay

1 X 10 = 10 Marks

1. Define acute renal failure (ARF) and list the causes, pathogenesis and effects of acute renal failure.

Short Essay

3 X 5 = 15 Marks

2. Describe etiopathogenesis, clinical features, morphology, treatment of Asbestosis.
3. End stage renal disease- discusses the causes and effects.
4. Write the differences between restrictive and obstructive lung diseases

Short Answers

5 X 3 = 15 Marks

5. Name three uses of renal dialysis.
6. Briefly describe chronic bronchitis.
7. Briefly describe chronic pyelonephritis
8. Pulmonary edema
9. List the various lesions under pneumoconiosis

Sec-B

Applied Microbiology(40 Marks)

Q.P Code:K4746

LONG ESSAY

1 X 10 = 10 Marks

1. Enumerate the source and factors contributing to infection and describe the infection control measures in ICU.

SHORT ESSAY

3 X 5 = 15 Marks

2. Mention the significant activities and describe the sterilisation methods in detail in Central Sterile Supply Department.
3. Enumerate Halogens used in disinfection. Describe the mechanism of action and uses of
4. Describe the gaseous methods of disinfection.

SHORT ANSWERS

5 X 3 = 15 Marks

5. Mention the disinfection method of the Heart-lung machine, Blood pressure cuff and glucometer.
6. Mention three indications of microbiological surveillance in OT.
7. Name three chemical sterilants.
8. Mention the holding temperature and time of Autoclave
9. Mention three articles sterilised by Hot air oven.

* * *



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

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

September 2024 Examination

B.Sc. Cardiac Perfusion Technology

Time: 2.30 Hrs.

[Max. Marks: 80]

Introduction to Cardiac Perfusion Technology

Q.P Code: K4750

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

LONG ESSAY

2 X 10 = 20 Marks

1. Explain the different blood components and their uses
2. What is extracorporeal circulation? Draw a neat diagram of CPB circuit and explain the principle of it

SHORT ESSAY

6 X 5 = 30 Marks

3. Difference between bubble and membrane oxygenators
4. What are the components of ECC and list out materials used in ECC?
5. What are Advantages and disadvantages of roller and centrifugal pump
6. Explain the principle of gas exchange in bubble oxygenator
7. Describe augmented venous drainage in detail
8. Briefly explain membrane oxygenator

SHORT ANSWERS

10 X 3 = 30 Marks

9. What is the purpose of venting
10. What are the disadvantages of roller pumps?
11. What is the Indication of femoral cannulation
12. What are the Problems and risks associated with the use of augmented venous return methods
13. Draw a diagram of a bicaval venous cannulation
14. Difference between packed blood cell and whole blood
15. Connectors and tubing's
16. Characteristics of Membrane oxygenator
17. What are the Benefits of hypothermia
18. What are the advantages and disadvantages of Bubble Oxygenator?

*** * ***



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

B.Sc. Allied Health Sciences (Semester- IV)

September 2024 Examination

B.Sc. Cardiac Perfusion Technology

Time : 2.30 Hrs.

Paper – IV

[Max. Marks : 80]

Medicine Relevant to Cardiac Perfusion Technology

Q.P Code : K4760

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

LONG ESSAY

2 X 10 = 20 Marks

1. List common disorders of CNS and classify them giving example for each type.
2. Diabetes mellitus. Definition, etiology, classifications, pathophysiology, signs & symptoms and management.

SHORT ESSAY

6 X 5 = 30 Marks

3. Explain chronic kidney disease.
4. Write a note on peritoneal dialysis.
5. Write the pathophysiology of type II diabetes mellitus.
6. Obesity.
7. Management of CKD.
8. List the neurodegenerative disorders. Write the causes, signs and symptoms, management.

SHORT ANSWERS

10 X 3 = 30 Marks

9. Write the classification of obesity.
10. Etiology of DM.
11. Management of Obesity.
12. Effects of diabetes mellitus on cardiovascular system.
13. Risk factors of CKD.
14. Explain complications of obesity.
15. Acute renal failure.
16. Diagnosis of chronic kidney disease.
17. What are the drugs to avoid for a pregnant patient undergoing CPB.
18. List three differences between adult and pediatric patients.

*** * ***