

QP Code:

Reg. No.:.....

**Second Year B.Sc Perfusion Technology Degree Examinations**

(Model Question Paper)

**Applied Pathology & Applied Microbiology**

**Time: 3hrs**

**Maximum marks: 100**

- Answer all questions
- Draw diagrams wherever necessary
- Write Section A and Section B in Separate answer book (32 Pages). Do not mix up questions from Section A and Section B

**SECTION A**

**Applied Pathology**

**50**

**Essay**

**(2x10=20)**

1. Briefly describe the causes, mechanism, effects and laboratory diagnosis of acute renal failure
2. Define anemia. Mention the classification and diagnosis of anemia. What are the causes of haemolytic anemia.

**Short notes**

**(4x5=20)**

3. Laboratory tests used to diagnose bleeding disorders.
4. Pneumoconiosis.
5. Pericardial effusion.
6. Pathophysiology of heart failure.

**Answer briefly**

**(5x2=10)**

7. Risk factors of hypertension.
8. Pathogenesis of atherosclerosis.
9. Causes of cardio myopathy.
10. Classify congenital heart disease with suitable examples.
11. Pathology of mitral stenosis.

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**SECTION B**

**Applied Microbiology**

**50**

**Essay**

**(2x10=20)**

1. Briefly describe the health care associated infections.
2. Briefly describe the different methods of bio-medical waste management.

**Short notes**

**(4x5=20)**

3. Mycobacterium tuberculosis.
4. Pseudomembranous colitis.
5. Antibiotic sensitivity tests.
6. Emerging infections.

**Answer briefly**

**(5x2=10)**

7. Passive immunisation.
8. Toxoids.
9. Antimicrobial resistance.
10. Normal flora of genito urinary tract.
11. Coliform count.

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## Second Year B.Sc Perfusion Technology Degree Examinations

(Model Question Paper)

### Introduction to Perfusion Technology

**Time: 3hrs**

**Maximum marks: 100**

- *Answer all questions*
- *Draw diagrams wherever necessary*

#### **Essay**

**(2x15=30)**

1. Discuss the various types of oxygenators. What is an Ideal blood pump. Differentiate between • pulsatile and non-pulsatile flow. • Occlusive and non-occlusive pumps.
2. Describe the Principles of extracorporeal circulation. Discuss the Materials used in EC circuit. Explain the principles of extracorporeal gas exchange.

#### **Short notes**

**(5x7=35)**

3. Haematological monitoring in CPB.
4. Bubble trap.
5. Connection of the vascular system with extracorporeal circulation.
6. Hazards of extra corporeal circulation.
7. Neurologic complications of CPB.

#### **Answer briefly**

**(7x5=35)**

8. Azygous flow principle.
9. Controlled cross circulation.
10. Artificial heart valves.
11. Cardioplegia delivery system.
12. Management of hyperkalaemia.
13. Coronary vasodilators.
14. Anticoagulants.

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## Second Year B.Sc Perfusion Technology Degree Examinations

(Model Question Paper)

### Pharmacology

**Time: 3hrs**

**Maximum marks: 80**

- *Answer all questions*
- *Draw diagrams wherever necessary*

**Essay**

**(2x10=20)**

1. Classify anti- hypertensive. Describe the mechanism of action, dosage, side effects, contra indications and uses of Metaprolol.
2. Classify general anaesthetics. Describe the pharmacokinetics and pharmaco dynamics of inhaled anaesthetic agents. Mention the uses and side effects of halothane.

**Short notes**

**(6x5=30)**

3. Drugs used in metabolic and electrolyte imbalance
4. Immunosuppressive agents
5. Mechanism of action, dosage, side effects and route of administration of diuretics
6. Pharmacotherapy of bronchial asthma.
7. Classification, mechanism of action, adverse effects and complications of corticosteroids
8. Classification, spectrum of activity, routes of administration and adverse effects of Penicillin.

**Answer briefly**

**(10x3=30)**

9. Advantages of enteral route of drug administration
10. First pass metabolism of drugs
11. Name 3 sympathomimetic drugs. Mention its uses
12. Name 3 cardiac glycosides .Mention its uses.
13. Management of digoxin toxicity.
14. Management of hyperkalaemia.
15. Coronary vasodilators.
16. Lipid lowering agents.
17. Anticoagulants.
18. Drugs used in the treatment of shock .

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## Second Year B.Sc Perfusion Technology Degree Examinations

(Model Question Paper)

### Medicine Relevant to Perfusion Technology

**Time: 3hrs**

**Maximum marks: 80**

- *Answer all questions*
- *Draw diagrams wherever necessary*

#### Essay

(2x10=20)

1. Discuss rheumatic heart disease. Describe the pathology , clinical features, diagnosis and management of mitral stenosis.
2. Classify anti -hypertensive. How will you investigate a case of primary hypertension. What is malignant hypertension. .

#### Short notes

(5x7=35)

3. Rheumatic carditis.
4. Aortic aneurism.
5. Management of pulmonary oedema.
6. Pharmacotherapy of bronchial asthma.
7. Anaemia.

#### Answer briefly

(5x5=25)

8. Coronary vasodilators.
9. Drugs used in the treatment of shock
10. Infective endocarditis.
11. Artificial heart valves.
12. Cardiac glycosides.

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