



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

**March 2024 Examination**

**B.Sc. Anesthesia & Operation Theatre Technology**

**Time: 3 Hrs.**

**Paper – I**

**[Max. Marks: 100]**

**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 : J3095**

**Long Essay**

**2 X 10 = 20 Marks**

1. Define COPD . Describe etiopathogenesis, clinical features and complications of Emphysema
2. Classify leukemia. Describe briefly Chronic Myeloid Leukemia

**Short Essay (Answer any Three)**

**3 X 5 = 15 Marks**

3. Classify Anemia. Note on causes, pathophysiology of macrocytic anemia
4. Classify pneumoconiosis
5. Asthma- causes, types and pathophysiology
6. Mention various methods of estimation of Haemoglobin
7. Pulmonary congestion

**Short Answers (Answer any Five)**

**5 X 3 = 15 Marks**

8. Sickle cell anemia
9. leukopenia
10. Three cause of pleural effusion
11. Name the three RBC indices
12. silicosis
13. Mention three complication/hazards of blood transfusion
14. Neutrophilia

**Section – B**

**Applied Microbiology (50 Marks)**

**Q.P Code : J3096**

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

**Long Essay**

**2 X 10 = 20 Marks**

1. Classify sterilization. Describe in detail the working principle of Autoclave with a diagram. List the sterilization controls used in the Autoclave. (4+4+2).
2. Define health care associated infection. Enumerate the causative agents, predisposing factors and Describe the preventive measures for Surgical site infection. (2+2+3+3)

**Short Essay (Answer any Three)**

**3 X 5 = 15 Marks**

3. Enumerate Alcohols used in disinfection. Describe the mechanism of action and uses of Alcohols.(1+1+3)
4. Describe the mechanism of HEPA filter filtration and its application. (3+2)
5. Describe the Operation theatre Sterilization.
6. Describe the functions and work flow at CSSD.
7. Enumerate the components of standard precautions. Describe blood spill management.(2+3)

**Short Answers (Answer any Five)**

**5 X 3 = 15 Marks**

8. Enumerate the 2 disinfectants used for fumigation. Describe the one advantage and disadvantage of each disinfectant.
9. Enumerate the 3 infections acquired following needle stick injury.
10. Enumerate the five moments of Hand Hygiene.
11. Enumerate 3 agents causing Catheter Associated Urinary Tract Infection.
12. Mention the mode of action and uses of Sodium hypochlorite in the hospital. (1+2)
13. Enumerate the 3 methods employed for testing disinfectants
14. Describe the principle of Tyndallisation and mention the items sterilized by this method. (1+2)



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**March 2024 Examination**

**B.Sc. Anesthesia & Operation Theatre Technology**

**Time : 3 Hrs.**

**[ Max. Marks : 100]**

**Paper-II**

**Introduction to OT Technology**

**Q.P Code : J3100**

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

*Draw neat labeled diagrams wherever necessary.*

**Long Essay**

**2 X 10 = 20 Marks**

1. Enumerate the mapleson breathing circuits. Write a note on each one of them?
2. Discuss the indications and equipment used in the oxygen therapy.

**Short Essay (Answer any Ten)**

**10 X 5 = 50 Marks**

3. Write a note on endotracheal tube, Types uses of each type of ET tube?
4. Draw a labelled diagram of a gas cylinder. What are the parts of cylinder and their functions
5. What are the considerations when using packing materials for sterilization?
6. What is spauldings classification of patient care items?
7. Write a note on nitrous oxide?
8. Classify breathing system according to mapleson system five suitable example?
9. What are the different components of an epidural tray?
10. Write a note on systemic effects of thiopentone?
11. What are the different types of anaesthesia? What are the surgeries done under each type of anaesthesia?
12. What are components of appropriate attire worn in operation theatre?
13. Procedure for surgical hand hygiene?
14. What are different types of adverse reaction see with use of local anesthetic agents?

**Short Answers (Answer any Ten)**

**10 X 3 = 30 Marks**

15. What are the signs and symptoms of local anesthetic toxicity?
16. What is TIVA
17. Advantages and disadvantages of thiopentone?
18. What is flash sterilization?
19. What are two folds of wrapping items for sterilization? Where should package be wrapped?
20. Safety features in flow meters?
21. What are 3 different types of laryngoscope blades?
22. Name 3 different types of oral airways?
23. Name 3 different ways to give oxygen patients?
24. Name 3 types of vaporisers.
25. Colour coding for waste disposable?
26. What is RAE tube? Where are they used?



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

**March 2024 Examination**

**B.Sc. Anesthesia & Operation Theatre Technology**

**Time : 2 Hrs.**

**[Max. Marks : 40]**

**SUBJECT : PHARMACOLOGY**

**Q.P Code : J3110**

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

*Draw neat labelled diagrams wherever necessary.*

**Long Essay**

**1 X 10 = 10 Marks**

1. Classify Opioid analgesics . Explain mechanism of action, uses and adverse effects of morphine

**Short Essay (Answer any Three)**

**3 X 5 = 15 Marks**

2. Explain mechanism of action, uses and adverse effects of diazepam
3. Explain mechanism of action, uses and adverse effects of Anti-cholinesterases
4. Write the advantages and disadvantages of halothane .
5. Classify local anesthetics with examples and write the mechanism of action of lignocaine.

**Short Answers (Answer any Five)**

**5 X 3 = 15 Marks**

6. Mention three alpha receptor blockers and their uses .
7. Rationale of combining lignocaine and adrenaline in local anaesthesia
8. List three drugs administered by IV route
9. Mention the management of Organophosphorus compound poisoning
10. Write the mechanism of action and two uses of metoprolol
11. Mention three uses and three adverse effects of diclofenac

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

**March 2024 Examination**

**B.Sc. Anesthesia & Operation Theatre Technology**

**Time : 2.30 Hrs.**

**[Max. Marks: 80]**

**PAPER-IV**

**Medicine relevant to OT Technology**

**Q.P Code: J3120**

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

**Long Essay**

**2 X 10 = 20 Marks**

1. Etiology, clinical features, investigations and treatment of chronic bronchitis
2. Define and classify anemia. How to approach case of anemia ?

**Short Essay (Answer any Six)**

**6 X 5 = 30 Marks**

3. Neonatal resuscitation
4. Problems of obesity
5. Supine hypotension syndrome
6. Obstructive sleep apnea
7. Diagnosis and treatment of PIH
8. Signs and symptoms of patient with eclampsia
9. Coronary artery disease
10. NYHA classification of breathlessness

**Short Answers (Answer any Ten)**

**10 X 3 = 30 Marks**

11. Name 3 diuretics
12. Renal function test
13. Uses of spirometry
14. Gestational diabetes
15. Risk factors of stroke
16. Types of angina pectoris
17. Define tidal volume
18. APGAR score
19. Anti-hypertensive drugs
20. Oral hypoglycemia
21. Name any 3 chronic complications of diabetes mellitus
22. Complications of iron therapy

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

**March 2024 Examination**

**B.Sc. Anesthesia & Operation Theatre Technology (OTT)**

**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 : K3095**

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

*Draw neat labelled diagrams wherever necessary.*

**LONG ESSAY**

**1 X 10 = 10 Marks**

1. Define Emphysema. Describe etiopathogenesis, clinical feature and complications of emphysema

**SHORT ESSAY**

**3X 5 = 15 Marks**

2. Describe the blood picture in Chronic myeloid leukemia
3. Write a brief note on causes for bleeding disorder
4. Describe pathogenesis and clinical features of pleural effusion

**SHORT ANSWERS**

**5 X 3 = 15 Marks**

5. Write 3 difference between Transudate and Exudate
6. Name the coagulation factors.
7. Write three causes of pulmonary edema
8. Name three causes for MACROCYTIC anemia
9. List the causes for monocytosis

**Section – B**

**Applied Microbiology (40 Marks)**

**Q.P Code : K3096**

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

**LONG ESSAY**

**1 X 10 = 10 Marks**

1. Define and classify sterilization. Describe the methods of sterilization by dry heat.

**SHORT ESSAY**

**3 X 5 = 15 Marks**

2. Describe the infection control practices in Infection control unit (ICU).
3. Describe the segregation methods and disposal of Biomedical waste.
4. Describe the functions and work flow at CSSD.

**SHORT ANSWERS**

**5 X 3 = 15 Marks**

5. Describe the control measures of Methicillin resistant *Staphylococcus aureus*.
6. Describe blood spill management.
7. Name the methods of sterilization of plastics syringes, Catgut suture and forceps.
8. Enumerate 4 health care associated infections.
9. Mention the advantages and disadvantages of Hydrogen peroxide as a fumigating agent.

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

**March 2024 Examination**

**B.Sc. Anesthesia & Operating Theatre Technology**

**Time : 2.30 Hrs.**

**Paper –II**

**[Max. Marks : 80]**

**Subject: Introduction to Aneasthesia and OT Technology**

**Q.P Code : K3100**

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

**Long Essay**

**2 X 10 = 20 Marks**

1. Write a note on manifold? Discuss the advantages of central pipeline system. Write a note on safety features in central pipeline systems?
2. Enumerate oxygen therapy devices briefly explain about the indication and usage of oxygen delivery devices?

**Short Essay**

**6X 5 = 30 Marks**

3. Different types of face mask available? What are different generation of LMA? Five examples of each?
4. What is bair circuit? What are the advantages and disadvantages of bair circuit?
5. What is epidural anesthesia, Drugs used in epidural anesthesia, surgeries done under epidural anesthesia?
6. Classify iv agents Write a short note on each of them?
7. Parts of Anesthesia machine
8. Types of filters used in sterilization, describe Candle filters?

**Short Answers**

**10 X 3 = 30 Marks**

9. Sterilization by radiation
10. Contents of propofol
11. Plasma sterilization
12. Neat labelled diagram of airway
13. Physical agents of sterilization
14. Uses of dry heat sterilization
15. Different sizes of guadels airway
16. Standard precautions
17. TIVA
18. Colour coding of Cylinders

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**B.Sc. Allied Health Sciences Second Year Semester-III**  
**March 2024 Examination**

**B.Sc. Anaesthesia & Operation Theatre Technology**

Time : 2 Hrs.

[Max. Marks : 40]

**SUBJECT : APPLIED PHARMACOLOGY**

**Q.P Code: K3110**

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

*Draw neat labelled diagrams wherever necessary.*

**LONG ESSAY**

**1 X 10 = 10 Marks**

1. a. Classify opioid analgesics with examples  
b. classify non-steroidal anti inflammatory drugs ( NSAID's) with examples

**SHORT ESSAY**

**3 X 5 = 15 Marks**

2. List the advantages and disadvantages of halothane
3. Explain mechanism of action ,uses and adverse effects of ketamine
4. Lignocaine

**SHORT ANSWERS**

**5 X 3 = 15 Marks**

5. Mention three colloids
6. Explain three mechanism of action and write two uses of pancuronium
7. Write three merits and demerits of Subcutaneous route
8. Mention three adrenergic agonists
9. Mention three cholinergic antagonists

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

**March 2024 Examination**

**B.Sc. Anesthesia and Operation Theatre Technology**

**Paper – IV**

**[Max. Marks: 80]**

**Time: 2.30 Hrs.**

**Subject: Medicine relevant to Anesthesia and OT Technology**

**Q.P Code: K3120**

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

*Draw neat labelled diagrams wherever necessary.*

**Long Essay**

**2 X 10 = 20 Marks**

1. Define and classify obesity. Describe its risk factors, Etiology, pathogenesis and Complications of Obesity?
2. 45 Years old male patient with COPD posted for Laparotomy. What are the preoperative complications anticipated and how will u manage

**Short Essay**

**6 X 5 = 30 Marks**

3. Physiological changes in pregnancy?
4. Preoperative complications and treatment of anemia
5. Define emphysema, describe its etio pathophysiology
6. Anatomical and physiological changes in elderly patient
7. Diabetic ketoacidosis
8. Define and classify hypertension and its complications

**Short Answers**

**10 X 3 = 30 Marks**

9. Oral hypoglycemic agents
10. Treatment of Diabetes ketoacidosis
11. Clinical features of bronchial asthma
12. Clinical features of anemia
13. Cardio vascular and respiratory changes in pregnancy
14. Beta blockers
15. Risk factors of ischemic heart disease
16. Care taken to obese patient during positioning for spine surgery
17. Insulin
18. Body mass index

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