



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

April 2023 Examination

**B.Sc. Anesthesia & Operation Theatre 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 : J3095**

**LONG ESSAY**

**2 X 10 = 20 Marks**

1. Define anemia. Classify anemia based on morphology and etiological factors
2. Define pneumoconiosis. Describe etiopathogenesis of coal workers pneumoconiosis

**SHORT ESSAY (Answer any three)**

**3 X 5 = 15 Marks**

3. Classify leucocytes. Describe microscopic morphology of leucocytes with a diagram
4. Write the differences between transudate and exudate
5. List three causes for Megaloblastic anemia and describe the changes in RBC indices.
6. Define leukemia. Write the classification of leukemia
7. Write etiopathogenesis of emphysema

**SHORT ANSWERS (Answer any five)**

**5 X 3 = 15 Marks**

8. Write three causes for agranulocytosis
9. What three test used to evaluate bleeding disorder
10. Write three causes for eosinophilia
11. Write three causes for pulmonary congestion
12. Write three clotting factors
13. Write three causes for microcytic hypochromic anemia
14. Describe the morphology of Asbestos body

**Section – B**

**Applied Microbiology (50 Marks)**

**Q.P Code : J3096**

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

**LONG ESSAY**

**2X10=20 Marks**

1. Discuss briefly the common types of health care associated infections.
2. Define sterilization. Classify the sterilization methods and discuss in detail about dry heat sterilization (2+4+4)

**SHORT ESSAY( Answer any three)**

**3X5= 15 Marks**

3. Methicillin resistant *Staphylococcus aureus*. (MRSA)
4. Spaulding's classification
5. Enumerate Phenolic disinfectants. Describe the mechanism of action and uses of Phenols.
6. Biomedical waste management
7. OT sterilization

**SHORT ANSWERS ( Answer any five)**

**5X3=15 Marks**

8. What is Cold sterilization? give two examples.
9. Name three methods of sterilizing critical items
10. Enumerate bacteria causing nosocomial infection.
11. List Personal protective equipments
12. 5 moments of hand hygiene
13. Uses of antiseptics.
14. Mention methods of testing disinfectants



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

**2X10=20 Marks**

1. Define disinfection. Describe in detail about disinfection by heat
2. Mention inhalational agents used in general anaesthesia. Describe in detail about isoflurane

**Short Essay (Any ten)**

**10X5=50 Marks**

3. Describe steam sterilization and its monitoring.
4. Types of filters used in sterilization. Describe membrane filters.
5. Levels of contamination in detail with examples.
6. Mention MAC values & blood gas coefficient of anaesthetic gases.
7. Halothane.
8. Midazolam.
9. Spinal anaesthesia.
10. Describe endotracheal tube with neat labelled diagram.
11. Oxygen cylinder.
12. Classification of biomedical wastes.
13. Treatment of local anaesthetic toxicity.
14. Halothane hepatitis.

**Short Answers (Any ten)**

**10X3=30 Marks**

15. Mention types of fluid filters
16. What is semi critical level of contamination? Mention its examples
17. Flash sterilization
18. Indicators of sterilization
19. Uses of dry heat sterilization
20. Inspissator
21. Diffusion hypoxia
22. Dissociative anaesthesia
23. Characteristics of ideal suture material
24. Non-absorbable suture materials
25. Types of laryngoscope
26. Face mask

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**B.Sc. Allied Health Sciences Second Year (Semester-III)**  
**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 × 10 = 10 Marks**

1. a. Classify opioids analgesics-----4
- b. Explain mechanism of action, uses and adverse effects of morphine----- 1+3+2

**Short essay (Answer any three)**

**3 × 5 = 15 Marks**

2. List the crystalloids, their uses and adverse effects (2+2+1)
3. Explain mechanism of action, uses and adverse effects of neostigmine (1.5+2.5+1)
4. Mention **five** techniques of administration of lignocaine with type of surgery done (5)
5. Explain mechanism of action, uses and adverse effects of pancuronium (2+1+2)

**Short answer (Answer any five)**

**5 × 3 = 15 Marks**

6. Mention **two** uses and **one** adverse effect of propofol
7. Mention **three** beta blockers and write **three** uses
8. Mention **three** types of drug antagonism with **one** example for each
9. Mention **three** uses of atropine
10. Mention **three** routes of drug administration with **one** example for each
11. Mention **three** uses of adrenaline

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

**2X10=20 Marks**

1. Define and classify chronic obstructive pulmonary disease. Describe etiopathogenesis, risk factors and perioperative complications
2. Define anemia. Describe etiopathogenesis, perioperative complications and management of anemia

**Short Essay (Any Six)**

**6X5=30 Marks**

3. Treatment of diabetes mellitus.
4. Define hypertension. Describe JNC classification of hypertension
5. Perioperative complications and treatment of ischemic heart disease
6. Perioperative complications anticipated in elderly patients and their management
7. Hypertensive crisis
8.  $\beta$ -blockers
9. supine hypotension syndrome
10. treatment of anemia

**Short Answers (Any ten)**

**10X3=30 Marks**

11. complications of diabetes mellitus
12. treatment of hypoglycemia
13. Complications of hypertension
14. Treatment of diabetic ketoacidosis
15. Risk factors of ischemic heart disease
16. Body mass index
17. Risk factors of obesity
18. Hypertensive crisis
19. Clinical features of pregnancy induced hypertension
20. Causes of anemia
21. Perioperative complications of bronchial asthma
22. ACE inhibitors



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

**April 2023 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 anemia. Describe the morphology of megaloblastic anemia. Write the investigations done in case of megaloblastic anemia

**SHORT ESSAY**

**3X 5 = 15 Marks**

2. Describe the pathogenesis of Hemophilia and discuss the laboratory diagnosis
3. Describe etiopathogenesis of silicosis
4. Classify leukemia. Write difference between leukemia and leukamoid reaction

**SHORT ANSWERS**

**5 X 3 = 15 Marks**

5. Draw a microscopic diagram of microcytic hypochromic blood picture
6. Write 3 difference between Transudate and Exudate
7. What three test used to evaluate bleeding disorder
8. Write three causes for lymphocytosis
9. Name the clotting factors

**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 disinfectants and antiseptics. Classify disinfectants with examples and their uses.

**SHORT ESSAY**

**3 X 5 = 15 Marks**

2. Enumerate Phenolic disinfectants. Describe the mechanism of action and uses of Phenols.
3. Describe the mechanism of HEPA filter filtration and its application.
4. Describe the principle and applications of Autoclave

**SHORT ANSWERS**

**5 X 3 = 15 Marks**

5. Name the methods of sterilization of glass wares, culture media and oils and greases .
6. Five moments of Hand Hygiene .
7. Mention the mode of action and uses of Sodium hypochlorite in the hospital.
8. Enumerate 3 agents causing Central line associated blood stream infection.
9. Enumerate the 2 advantages and 2 disadvantages of Ethylene oxide.

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

**April 2023 Examination**

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

**Paper –II**

**[Max. Marks : 80]**

**Time : 2.30 Hrs.**

**Subject: Introduction to Anesthesia 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. How is Waste segregated in the operation theatre? What are the different methods of waste disposal?
2. What are the different methods of sterilization? Explain in detail with relevant examples.

**SHORT ESSAY**

**6 X 5 = 30 Marks**

3. What are the steps to be performed to assemble instruments sets for sterilization?
4. What are the considerations when using packaging materials for sterilization?
5. What is team under pressure type of sterilization? What are the advantages and disadvantages of steam sterilization?
6. What are the different type of anesthesia? What are the Surgeries done under each type of anesthesia?
7. What are the different features of anesthesia machine?
8. List the different. IV Anesthetic agents and their advantages and disadvantages.

**SHORT ANSWERS**

**10 X 3 = 30 Marks**

9. Define bioburden.
10. What is the basis of ultrasonic cleaning? What type of instruments are cleaned by ultrasonic cleaning?
11. Name 6 liquid chemical disinfectants.
12. How are Sharp and needle disposed in the Operation theatre.
13. What are the 3 lines of Défense important for Prevention of disease.
14. Name 6 common microorganisms in an OT.
15. What is the difference between aseptic and sterile technique?
16. Why shouldn't oxygen cylinder be kept under the sun?
17. What are the steps of hand washing?
18. What are the 3 levels of disinfection?

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

**April 2023 Examination**

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

**Time : 2.30 Hrs.**

**Paper – IV**

**[Max. Marks : 80]**

**Subject: Medicine relevant to Aneesthesia 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. Mention the causes of hypertension. Discuss the management of accelerated hypertension.
2. Classification of anemia. Diagnosis and treatment of iron deficiency anemia?

**SHORT ESSAY**

**6 X 5 = 30 Marks**

3. Value of peripheral smear in diagnosis of anaemia.
4. Classification of hypertension?
5. Clinical features and management of unstable angina..
6. Bronchial Asthma?
7. Anaesthetic challenges for Morbid obesity
8. Informed consent.

**SHORT ANSWERS**

**10 X 3 = 30 Marks**

9. Anaesthetic challenges in managing a geriatric patient.
10. Labour analgesia.
11. Respiratory changes in pregnancy?
12. Name 3 Acute Complications of diabetes mellitus.
13. Cause of secondary hypertension.
14. Name 3 acute complication of diabetes mellitus?
15. Name 3 spinal analgesic drugs?
16. Name 3 lung function test.
17. Name 3 drugs used in treatment of hypertension.
18. Cardiovascular changes in elderly patient?

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