

**B. Sc. MEDICAL TECHNOLOGY (OPERATION THEATRE) (BOT)
SEMESTER -IV EXAMINATION, JUNE-2026**

(BOT403) MEDICAL DISEASES INFLUENCING CHOICE OF ANESTHESIA

[Time allotted: Three Hours]

[Max Marks: 100]

Note: Read all the instructions carefully

Answer all questions in serial order. Draw suitable diagrams wherever necessary

Q. 1. Objective type questions: (Attempt All)**(10 x 02 = 20)**

(Very short/ short answer/ MCQ/ One liners/ Fill in the blanks/ True/False)

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| <p>a. Which anaesthetic agent is commonly avoided in patients with asthma? CO1, PO1</p> <p>i. Propofol</p> <p>ii. Halothane</p> <p>iii. Sevoflurane</p> <p>iv. Ketamine</p> <p>b. Which anaesthesia technique is usually preferred for a patient with stable heart disease? CO2, PO2</p> <p>i. General anaesthesia</p> <p>ii. Spinal anaesthesia</p> <p>iii. Regional anaesthesia</p> <p>iv. Local anaesthesia</p> <p>c. Which of the following is a primary concern for anaesthesia in patients with kidney disease? CO3, PO3</p> <p>i. Dehydration</p> <p>ii. Drug metabolism in the liver</p> <p>iii. Drug excretion by the kidneys</p> <p>iv. Increased blood sugar</p> <p>d. Why is it important to monitor blood sugar levels in diabetic patients during surgery? CO1, PO4</p> <p>i. To prevent fever</p> <p>ii. To avoid infections</p> <p>iii. To manage glucose levels</p> <p>iv. To check kidney function</p> <p>e. Which anaesthetic agent should be avoided in patients with a history of seizures? CO2, PO5</p> <p>i. Propofol</p> <p>ii. Etomidate</p> <p>iii. Enflurane</p> <p>iv. Thiopental</p> | <p>f. What is a major consideration when choosing anaesthesia for a patient with liver disease? CO1, PO2</p> <p>i. Cardiac function</p> <p>ii. Drug metabolism</p> <p>iii. Renal function</p> <p>iv. Respiratory rate</p> <p>g. Which type of anaesthesia is generally safer for patients with chronic lung diseases like COPD? CO2, PO1</p> <p>i. General anaesthesia</p> <p>ii. Regional anaesthesia</p> <p>iii. Deep sedation</p> <p>iv. Local anaesthesia</p> <p>h. What should be avoided when providing anaesthesia to a patient with epilepsy? CO3, PO3</p> <p>i. Increased oxygen levels</p> <p>ii. Drugs that lower seizure threshold</p> <p>iii. Low blood pressure</p> <p>iv. Slow heart rate</p> <p>i. For a patient with high blood pressure, which anaesthetic technique is preferred? CO1, PO4</p> <p>i. High-dose general anaesthesia</p> <p>ii. Regional anaesthesia</p> <p>iii. Spinal anaesthesia</p> <p>iv. Local anaesthesia</p> <p>j. What is a common concern when administering anaesthesia to an obese patient? CO2, PO2</p> <p>i. High heart rate</p> <p>ii. Difficult airway management</p> <p>iii. Dehydration</p> <p>iv. Low blood sugar</p> |
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Q. 2. Short notes/ Short answer type questions (Attempt any Five)**(05 x 04 = 20)**

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| a. Difference between crystalloids and colloids. | CO1, PO1 |
| b. Write a short note on XYLOCAINE | CO3, PO9 |
| c. Describe the anaesthetic considerations for a patient with kidney disease. | CO3, PO3 |
| d. What are the key concerns when providing anaesthesia to an infant? | CO1, PO4 |
| e. Write a short note on cardiac compressions only. | CO2, PO5 |
| f. Write a note on side effects of succinyl choline? | CO3, PO2 |
| g. What are the anaesthetic challenges in obese patients, and how can they be managed? | CO1, PO3 |

Q. 3. Structured questions (Attempt any Three)**(03 x 10 = 30)**

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| a. Discuss the anaesthetic management for a patient with chronic obstructive pulmonary disease (COPD) undergoing surgery. | CO1, PO1 |
| b. Explain the anaesthetic considerations for a patient with diabetes. Include preoperative and intraoperative management. | CO2, PO3 |
| c. Describe the challenges and solutions in administering anaesthesia to a pregnant patient | CO3, PO5 |
| d. What are the anaesthetic considerations for an elderly patient? | CO2, PO1 |

Q. 4. Long Answer/ Essay type questions (Attempt any Two)**(02 x 15 = 30)**

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| a. Describe in detail the anaesthetic management strategies for an elderly patient scheduled for elective surgery. Include preoperative, intraoperative, and postoperative considerations. | CO1, PO1 |
| b. Discuss emergency drugs kept in OT. | CO2, PO3 |
| c. Classify neuromuscular blocker. Briefly describe one depolarizing and one non depolarizing muscle relaxant | CO3, PO5 |