

Jan-26

BLDE (DEEMED TO BE UNIVERSITY)

B.Sc. in Operation Theatre Technology

[Time: 3 Hours]

[Max. Marks: 80]

V SEMESTER

PAPER - I (Basics of Surgical Procedure)

QP CODE: 8545

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Define blood transfusion. Explain the types of blood groups, Rh factor, and steps of cross-matching before transfusion.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Describe the structure, function, and maintenance of an operating table.
3. Explain the procedure of blood collection, preservation, and storage.
4. Write short notes on different blood components and their uses.
5. Explain the Coombs test and its importance in blood transfusion.
6. Describe the principle and working of monopolar and bipolar diathermy.
7. Write short notes on shock – types, causes, and management.
8. Discuss the precautions and hazards of using diathermy machines.
9. Explain the principles of operation theatre sterilization and maintenance.
10. Write a short note on body fluid compartments and the effect of fluid therapy.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Define plasma and platelets.
12. Write any three complications of blood transfusion.
13. Mention three uses of crystalloids.
14. Define colloid solutions and give two examples.
15. Name three types of operation lights used in OT.
16. Write three preventive measures for electric hazards in OT.
17. Define venesection.
18. Mention three signs of hypothermia.
19. What is a pneumoperitoneum?
20. Write three functions of an operation table.
21. Define standardization of blood.

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V SEMESTER

PAPER - II (CSSD Procedures)

QP CODE: 8546

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Define sterilization. Explain in detail the principle, procedure, and advantages of dry and wet sterilization methods.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Explain the principles of chemical disinfection and its applications in CSSD.
3. Write a short note on sterilization of anesthesia equipment.
4. Discuss the sterilization process for glassware and metal instruments.
5. Describe the working and maintenance of a hot air oven.
6. Write about biological and chemical indicators used in sterilization control.
7. Explain gaseous sterilization using ethylene oxide (ETO) and its safety measures.
8. Describe the role of CSSD in infection control.
9. Write a short note on plasma sterilization.
10. Explain the care, cleaning, and sterilization of fiber-optic bronchoscopes (FOB).

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Define sterilization control.
12. Mention any three methods of dry heat sterilization.
13. Define low-temperature sterilization.
14. CSSD-functions
15. Name three articles sterilized by gas sterilization.
16. Mention three advantages of autoclaving.
17. Write three hazards of improper sterilization.
18. Mention any three examples of high-level disinfectants.
19. Define fumigation.
20. Write three precautions during UV sterilization.
21. Mention any three uses of glutaraldehyde.

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V SEMESTER

PAPER - III (Advanced Anaesthetics Techniques)

QP CODE: 8547

Your answer should be specific to the questions asked.
Write Question No. in left side of margin.

10X1 = 10 Marks

Long Questions

1. Describe the principles, working, and care of a mechanical ventilator used during anaesthesia.

5 X 8 = 40 Marks

Short Essays: (Any – 8)

2. Explain cardiac output, its measurement, and factors affecting it.
3. Write short notes on ECG recording procedure and assessment.
4. Describe the modes of mechanical ventilation commonly used in operation theatres.
5. Write a note on the role of ventilator alarms and monitoring.
6. Explain physiology of circulatory shock and its management.
7. Describe the general care of a patient on a ventilator.
8. Explain regulation of arterial pressure and its control mechanisms.
9. Write short notes on acid-base imbalance and its correction.
10. Explain the functions of humidifiers and filters used in ventilator systems.

3 X 10 = 30 Marks

Short Answers: (Any – 10)

11. Define cardiac failure.
12. Mention any three types of cardiac arrhythmias.
13. Write three uses of oxygen therapy.
14. Define blood pressure.
15. Mention three parts of an ECG machine.
16. Define tidal volume.
17. Write three precautions while using a ventilator.
18. Mention three complications seen in ventilated patients.
19. Define cardiac contractility.
20. Write three uses of the heart-lung machine.
21. Define FiO_2 .

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V SEMESTER

PAPER - IV (ATOT Directed Clinical Education III)

QP CODE: 8548

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Define infection control. Explain in detail the principles and practices of infection prevention and control in the operation theatre.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Explain the roles and responsibilities of OT technicians in clinical procedures.
3. Describe the safe handling, cleaning, and disinfection of anaesthesia machines.
4. Write a note on patient monitoring during and after surgery.
5. Explain the steps and precautions in handling contaminated instruments.
6. Describe methods of patient identification and pre-operative preparation.
7. Explain different types of clinical drains and their management.
8. Write short notes on code red and code yellow in hospital emergency systems.
9. Discuss the precautions to prevent cross infection in clinical practice.
10. Explain the procedure for disposal of sharps and soiled linen in the OT.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Define asepsis.
12. Mention three components of personal protective equipment (PPE).
13. Write three steps for post-exposure management after a needle prick injury.
14. Mention three steps for donning sterile gloves.
15. Write three uses of suction apparatus.
16. Mention three causes of cardiac arrest in OT.
17. Define clinical waste.
18. Write three safety rules for operating electrical equipment.
19. Mention three color codes of biomedical waste bins.
20. Write three steps of sterile hand wash.
21. Define universal precautions.