

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0122]

JANUARY 2022

Sub. Code: 1141

(FEBRUARY 2021 & AUGUST 2021 EXAM SESSION)

B.Sc. OPERATION THEATRE & ANAESTHESIA TECHNOLOGY

THIRD YEAR

PAPER I – STERILIZATION PROCEDURES

Q.P. Code: 801141

Time: Three Hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. List out the predisposing factors involved in Post operative wound infections. Add a note on methods in preventing Surgical site infections.
2. Define dry heat sterilization. Describe in detail about principle, functions and uses of Hot air oven.
3. What are Hospital associated infections? Enumerate various types. How do you contain an emergence of an outbreak of Hospital associated infections.

II. Write notes on:

(8 x 5 = 40)

1. Needle stick injury.
2. Vaccines used among health care workers.
3. Indicators used in moist heat sterilization.
4. Ethylene oxide sterilization.
5. Functions of Central Sterile Supplies Department.
6. Theatre swab studies for anaerobic bacteria.
7. Aseptic precautions.
8. Spill kit.

III. Short answers on:

(10 x 3 = 30)

1. Mention any three commonly used antiseptics.
2. Methods to sterilize gloves and syringes.
3. Usefulness of 1% Sodium hypochlorite.
4. What is the importance of Methicillin resistant Staphylococcus aureus?
5. Surface disinfection.
6. Surgical wound cleaning.
7. Mention any three colour coded bins used inside the OT.
8. What is the use of Bowie dick strips in sterilization.
9. Flash sterilization.
10. Cleaning of tubings and catheters.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0922]

SEPTEMBER 2022

Sub. Code: 1141

(FEBRUARY 2022 & AUGUST 2022 EXAM SESSIONS)

B.Sc. OPERATION THEATRE & ANAESTHESIA TECHNOLOGY

THIRD YEAR – (Regulation from 2018-2019)

PAPER I – STERILIZATION PROCEDURES

Q.P. Code: 801141

Time: Three Hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Define disinfection. Classify and describe in detail about various levels of disinfection.
2. Segregation, storage and transport of Biomedical wastes generated in a health care setting.
3. Describe in detail about chemical sterilizations. Write a note on cleaning and sterilization of heat sensitive endoscopes.

II. Write notes on:

(8 x 5 = 40)

1. What is antisepsis? Write a note on routinely used antiseptics in hospitals.
2. What are HEPA filters? Describe about functions of them.
3. Role of a theatre assistant in monitoring safety of operation theatres.
4. Ozone gas sterilization.
5. What is pasteurization? Add a note on holder and flash methods.
6. Biological indicators used in heat sterilization methods.
7. Incineration.
8. Sorting and classification of equipments for cleaning purposes.

III. Short answers on:

(10 x 3 = 30)

1. Membrane filtration.
2. How do you manage a case of blood spill?
3. N 95 Facial masks.
4. Intercostal drainage.
5. Catheter associated urinary tract infections.
6. Name any three applications of Gamma radiation.
7. Management of Sharps.
8. Packing of Instruments.
9. What is biosafety?
10. Name any three aldehyde disinfectants.

THE TAMIL NADU DR.M.G.R. MEDICAL UNIVERSITY

[AHS 0423]

APRIL 2023

Sub. Code: 1141

B.Sc. OPERATION THEATRE & ANAESTHESIA TECHNOLOGY

THIRD YEAR (Regulation 2018-2019 onwards)

PAPER I – STERILIZATION PROCEDURES

Q.P. Code: 801141

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(30 x 1 = 30)

1. Discuss the criteria for defining Surgical Site Infection (SSI). Enumerate the Patient related risk factors for developing Surgical Site Infection.
2. Discuss about the Personal Protective Equipment and describe the role in Infection Control.
3. What is Chemical Sterilization? Discuss its classification and some common agents used in hospital setup.

II. Write notes on:

(8 x 5= 40)

1. Describe the general function of operation theatre.
2. Disinfection of HBV, HIV Contaminated Devices.
3. Responsibilities of Health worker in Biomedical Waste Management.
4. CSSD.
5. Flash sterilization.
6. Prevention of hospital acquired infection.
7. Advantages and disadvantages of moist heat sterilization.
8. Tests for disinfection.

III. Write answer on:

(10 x 3 = 30)

1. What is Antisepsis?
2. Mention three principles of disinfection.
3. Bactericidal agents.
4. Principle of hot air oven.
5. How will you disinfect gloves?
6. Types and uses of detergents.
7. Flaming and incineration.
8. Define H₂O₂ plasma vapor sterilization.
9. Name some mechanical cleaning machines.
10. Blood spill.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1123]

NOVEMBER 2023

Sub. Code: 1141

B.Sc. OPERATION THEATRE & ANAESTHESIA TECHNOLOGY

THIRD YEAR – (Regulation 2018-2019 onwards)

PAPER I – STERILIZATION PROCEDURES

Q.P. Code: 801141

Time: Three Hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Describe the general principles of Sterilization. Elaborate on Moist and Dry Heat Sterilization.
2. Describe the types, colour codes and methods of Biomedical Waste Management.
3. Classify Wrapping materials used in CSSD. Describe the methods of Wrapping and Packaging in CSSD.

II. Write notes on:

(8 x 5 = 40)

1. Surgical Site infection.
2. What is a biological indicator?
3. Personal Protective Equipment (PPE).
4. Mechanical cleaning apparatus.
5. Define the role of theatre assistant in monitoring safety of OT.
6. Describe the general function of Operation Theatre.
7. Disinfection of HBV and HIV Contaminated Devices.
8. Aldehyde Disinfectants.

III. Short answers on:

(10 x 3 = 30)

1. Define Pasteurization.
2. Define Nosocomial Infection.
3. Disinfection of Delicate instruments.
4. What are the chemical indicators?
5. Cleaning of tubing and catheters.
6. Different types and uses of detergents.
7. What is Antisepsis?
8. Define a) Nephrectomy b) Embolectomy c) Cystectomy.
9. What is the use of Bowie dick strips in Sterilization?
10. Principle of Hot Air Oven.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0424]

APRIL 2024

Sub. Code: 1141

B.Sc. OPERATION THEATRE & ANAESTHESIA TECHNOLOGY

THIRD YEAR – (Regulation 2018-2019 onwards)

PAPER I – STERILIZATION PROCEDURES

Q.P. Code: 801141

Time: Three Hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Define Disinfection. Enumerate different methods of Disinfection.
2. Write in detail on the various steps involved in cleaning instruments.
3. Write the principle of Moist heat sterilization. Write in detail about various types and applications of Autoclave.

II. Write notes on:

(8 x 5 = 40)

1. Spaulding classification.
2. Different types and uses of detergents.
3. Write a note on the importance of specimen labelling and Handling.
4. Colour coding and segregation of biomedical waste.
5. H₂O₂ gas plasma.
6. Cleaning and decontamination protocol for high risk baby care units.
7. Materials used for wrapping and assembling sterile pack contents.
8. Sterilization of prepacked items.

III. Short answers on:

(10 x 3 = 30)

1. Give three examples of surface disinfectants.
2. Give two examples of critical instruments.
3. Biological indicator for sterilization by hot air oven.
4. Importance of Date stamping on sterile packs.
5. Cleaning of glass wares.
6. Fogging.
7. Steps of Biomedical Waste Management.
8. Steps in hand hygiene.
9. Air disinfection.
10. Examples for high level disinfectants.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0125]

JANUARY 2025

Sub. Code: 1141

B.Sc. OPERATION THEATRE & ANAESTHESIA TECHNOLOGY

THIRD YEAR – (Regulation 2018-2019 onwards)

PAPER I – STERILIZATION PROCEDURES

Q.P. Code: 801141

Time: Three Hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Write in detail about Universal Safety Precautions.
2. Elaborate on the physical methods of Sterilization.
3. Write in detail about Segregation and Disposable of Waste Materials in Hospital.

II. Write notes on:

(8 x 5 = 40)

1. Hydrogen peroxide sterilization.
2. What is meant by High Level Disinfection (HLD)? What factors determines the effectiveness and describes its methods.
3. Discuss about the Ozone gas sterilization. Mention the advantage and disadvantage of it.
4. Guidelines for the use of some common disinfectant.
5. Needle stick injury.
6. Steps involved in decontamination process.
7. Steps of surgical hand scrub.
8. Chemical indicators used in CSSD.

III. Short answers on:

(10 x 3 = 30)

1. Inspissation.
2. Care of sharp instruments.
3. Types of Filtration.
4. Bacteria used as control in Autoclave.
5. Methods and materials used for Wrapping and Packaging.
6. Use of detergents in cleaning process.
7. What is biosafety?
8. How will you sterilize Endoscope?
9. What is Antisepsis?
10. Bactericide.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0425]

APRIL 2025

Sub. Code: 1141

B.Sc. OPERATION THEATRE & ANAESTHESIA TECHNOLOGY

THIRD YEAR – (Regulation 2018-2019 onwards)

PAPER I – STERILIZATION PROCEDURES

Q.P. Code: 801141

Time: Three Hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on: **(3 x 10 = 30)**

1. Classify Hospital Waste. Discuss the components of Waste Management with special mention about the Colour Coded Bins.
2. Classify Wrapping materials used in CSSD. Describe the methods of Wrapping and Packaging in CSSD.
3. Discuss about Hospital Acquired Infections and their Prevention.

II. Write notes on: **(8 x 5 = 40)**

1. Sterilization by Ethylene Oxide.
2. Fumigation of Theatres.
3. Advantages and disadvantages of Ozone Gas Sterilization.
4. What are the steps of decontamination of suction equipment?
5. Hand hygiene - steps.
6. Describe Ultrasonic cleaner and its use.
7. Describe the principle and working of an Autoclave.
8. Aldehyde disinfectants.

III. Short answers on: **(10 x 3 = 30)**

1. Post exposure prophylaxis.
2. Define Pasteurization.
3. Chemical indicators of Sterilization.
4. What is Antisepsis?
5. Define Cleaning.
6. Plasma sterilization.
7. What is the use of Bowie Dick strips in Sterilization?
8. Principle of Hot Air Oven.
9. Types of Filters.
10. What are the precautions needed in handling Bio hazardous materials?

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[AHS 1125]

NOVEMBER 2025

Sub. Code: 1141

B.Sc. OPERATION THEATRE & ANAESTHESIA TECHNOLOGY

THIRD YEAR – (Regulation 2018-2019 onwards)

PAPER I – STERILIZATION PROCEDURES

Q.P. Code: 801141

Time: Three Hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on: (3 x 10 = 30)

1. What precautions will you take if the patient is a HIV infected patient? Describe Biomedical Waste Management in detail.
2. Discuss the criteria for defining surgical site infection (SSI). Enumerate the patient related risk factors for developing surgical site infection.
3. Describe in detail about types and prevention of Nosocomial infections.

II. Write notes on: (8 x 5 = 40)

1. Mention the role of Theatre assistant in monitoring safety of OT.
2. Cleaning of catheters and tubings.
3. Personal Protective Equipment (PPE).
4. Controls used in Autoclave.
5. How will you sterilize Endoscopes? Describe it.
6. Advantages and disadvantages of Ozone gas sterilization.
7. Methods of wrapping and packaging in CSSD.
8. Fumigation of Theatres.

III. Short answers on: (10 x 3 = 30)

1. What is Antisepsis?
2. Cleaning Glass Ware.
3. Explain the instrument for abscess drainage.
4. Define Pasteurization.
5. Effects of not following Biomedical Waste in a Hospital.
6. Define Flash sterilization.
7. Nosocomial infection.
8. Principles of Sterilization.
9. Flaming and incineration.
10. H₂O₂ gas plasma vapo sterilization.
