

DIPLOMA IN CRITICAL CARE TECHNOLOGY

SECOND YEAR

PAPER II – APPLIED MICROBIOLOGY & INFECTION CONTROL

INCLUDING CSSD

Q.P. Code : 841212

Time: Three Hours

Maximum: 100 marks

Answer ALL questions

I. Elaborate on:

(3 x 10 = 30)

1. Discuss the salient features of family Entero bacteriaceae?
2. a) Describe about CSSD or what do you know about CSSD.
b) what is health care associated infection?
3. Role of infection control in hospitals?

II. Write notes on:

(10 x 5 = 50)

1. What is personal protective equipment and when should wear it?
2. What are the different waste receptacles garbage cans available?
3. Define: Blood borne pathogen standard.
4. What is the preventive method of MTB?
5. What is Isolation?
6. Define-Nosocomial infection?
7. What are dengue fever symptoms and sign?
8. What is MRSA and who gets MRSA?
9. Explain types of Sterilization?
10. What is the difference between disinfection and sterilization?

III. Short Answers on:

(10 x 2 = 20)

1. What is pathogen?
2. What are standard precautions?
3. What is sterile?
4. What is the single most important way to prevent the spread of disease?
5. What is MTB and how is it spread?
6. Give an example: Personal protective equipment?
7. What is an infection?
8. What is dengue fever?
9. What is the abbreviation of UNICEF?
10. APRONS.

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Answer ALL questions

I. Elaborate on:

(3 x 10 = 30)

1. Discuss the methods used to kill or control microorganism?
2. Describe the modes of transmission of HIV and HBV?
3. Explain: Gram's stain procedure and AFB procedure?

II. Write notes on:

(10 x 5 = 50)

1. What is infection and why we need antibiotics?
2. Explain: Droplet transmission and Vector transmission?
3. What is sharp injury and how to tackle it?
4. What are the benefits of proper Bio medical waste management?
5. What is health care associated infection?
6. What is the difference between Disinfection and Sterilization?
7. Explain the types of sterilization?
8. Describe the Air bone transmission and surgical site infection?
9. Write short notes on: Gram's stain procedure.
10. How bio medical waste is managed in your hospital?

III. Short Answers on:

(10 x 2 = 20)

1. Define Antibiotic.
2. What is MRSA?
3. What is Nosocomial infection?
4. What is Bio medical waste?
5. What is Isolation?
6. What is the first and most important step to infection control?
7. Describe about CSSD.
8. Aprons.
9. Transmission of Hepatitis B virus.
10. Define Bacteria.

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Maximum: 100 marks

Answer ALL questions

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

1. Define the concept of disinfection. Briefly describe the mode of action, advantages and disadvantages of any 5 disinfectants.
2. Explain in detail about Principles and methods of Sterilization.
3. Give a detail account on types and prevention of Nosocomial infections.

II. Write notes on: **(10 x 5 = 50)**

1. Briefly describe Biohazardous materials.
2. Give a short note on Disposal of infectious wastes.
3. State briefly about the role of health care workers in hospital environment.
4. Briefly analyse the mode of transmission and universal precaution for AIDS.
5. Describe the pathogenesis of amoebiasis.
6. Write a note on Hepatitis A viruses.
7. Write short notes on Measures of Quality control.
8. Give a brief note on EO gas sterilization.
9. Waste disposal collection of used items.
10. Precautions to be taken for loading ETO sterilizer.

III. Short Answers on: **(10 x 2 = 20)**

1. Give three examples of agents causing infection in ICU.
2. Define Post exposure prophylaxis.
3. Distinguish sterilization and disinfection.
4. State the Signs of Tetanus.
5. Give some examples of Bacteria are used as biological indicators in Steam sterilizer.
6. Write any three Pathological features of Dengue.
7. How will you clean fine and cannulated instruments?
8. What is Bowie Dick test?
9. Define CSSD.
10. Which sterilization method is suitable for plastic items?

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Maximum : 100 marks

Answer ALL questions

I. Elaborate on:

(3 x 10 = 30)

1. Write in detail about on physical and chemical agent of sterilization.
2. Write in detail about Nosocomial infection and their types.
Mention the management and prevention of Nosocomial infection.
3. Write about morphology features of HIV with a neat diagram and label parts.
Mention the mode of transmission and describe about the treatment.

II. Write notes on:

(10 x 5 = 50)

1. Explain the pathogenesis and features of tetanus.
2. Describe about amebiasis sepsis.
3. Describe about Biohazardous materials.
4. Hepatitis A.
5. Aseptic techniques.
6. Describe about cleaning and sterilization equipment.
7. Write in detail about infection control.
8. Collecting and transporting of clinical samples.
9. Write in detail about color coding of Bio medical waste management.
10. CSSD.

III. Short Answers on:

(10 x 2 = 20)

1. Define : Disinfection, Disinfectant.
2. What is MRSA? Who will get MRSA?
3. Write any three agents causing infection in ICU.
4. What is prophylaxis vaccination?
5. Hand washing Techniques.
6. Define : Cross infection.
7. Mode of transmission Hepatitis A, B, C.
8. What is infection and inflammation?
9. Drugs for HIV infection.
10. Universal Precaution equipments.

[LI 0216]

FEBRUARY 2016

Sub. Code: 1212

DIPLOMA IN CRITICAL CARE TECHNOLOGY

SECOND YEAR

PAPER II – APPLIED MICROBIOLOGY AND INFECTION CONTROL

INCLUDING CSSD

Q.P. Code : 841212

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

I. Elaborate on:

(3 x 10 = 30)

1. Explain and details about principles and methods of sterilization.
2. Write in details about leptospirosis infection and its management.
3. Explain and details about Bio-Medical waste management.

II. Write Notes on:

(10 x 5 = 50)

1. Write in details about prevention of Nosocomial infection.
2. Describe about Hepatitis C.
3. HIV.
4. What is needle prick injury? Role of infection control in hospitals.
5. Write about the agents causing respiratory tract infections.
6. Suggest methods for prevention and control of hospital acquired infection.
7. What is disinfection? Describe the agents using disinfection process.
8. Mention the morphological Features of clostridium tetani. Management of tetanus infection?
9. What is the different between emergent and non-emergent infections?
10. Write in details about Cleaning and sterilization of equipments.

III. Short Answers on:

(10 x 2 = 20)

1. Define : Nosocomial Infection.
2. Define : Sterile.
3. Write short notes on universal precaution techniques.
4. Mention the toxins produced by clostridium tetani.
5. Write about CSSD.
6. What is the role of health care workers Hospital waste?
7. Disposal of infected materials in bio medical waste management.
8. Define: Bacterimia and septicemia.
9. Mention Signs and symptoms of malaria.
10. Write about mode of transmission of Rickettsia.

[LJ 0816]

AUGUST 2016

Sub. Code : 1212

DIPLOMA IN CRITICAL CARE TECHNOLOGY

SECOND YEAR

PAPER II – APPLIED MICROBIOLOGY AND INFECTION CONTROL

INCLUDING CSSD

Q.P. Code: 841212

Time : Three hours

Maximum: 100 Marks

Answer **ALL** questions.

I. Elaborate on:

(3 x 10 = 30)

1. Draw a diagram and describe in detail about Autoclave.
2. Classify Nosocomial infections and write in detail about Surgical site infections.
3. Clinical features and management of Hepatitis B infection.

II. Write notes on:

(10 x 5 = 50)

1. Universal precautions.
2. Biomedical waste management.
3. Etiological agents causing infection in an ICU.
4. Modalities of Infection control.
5. Chemical disinfectants.
6. Modes of transmission of HIV/AIDS.
7. Clinical features and management of Malaria.
8. Sepsis.

III. Short answers on:

(10 x 2 = 20)

1. Biohazardous materials.
2. Various sources of infection.
3. Cleaning of a laparoscope.
4. Tetanus.
5. Amoebiasis.
6. Dengue.
7. Leptospirosis.
8. Hepatitis A.
9. Colour codes of Biomedical waste.
10. Quality control.

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Q.P. Code: 841212

Time : Three Hours

Maximum : 100 Marks

Answer All questions.

I. Elaborate on:

(3 x 10 = 30)

1. Write about the clinical features, management and prevention of HIV infection.
2. What are bio hazard materials? How should they be segregated and disposed?
3. What is CSSD? Explain in details about the different types of sterilization.

II. Write notes on:

(8 x 5 = 40)

1. Write briefly about the different types of hepatitis infections.
2. What are nosocomial infections? Mention the common organisms causing nosocomial infections.
3. Explain the cause and prevention of dengue fever.
4. What are the ways to interrupt transmission of infection in hospital?
5. Explain the precautions to prevent needle stick injury.
6. Write about the pathogenesis of Tuberculosis.
7. What is moist and dry heat sterilization?
8. Write briefly about autoclave, its uses and mechanism.
9. Clinical features and treatment of Amoebiasis.
10. Write short notes on Malaria.

III. Short answers on:

(10 x 3 = 30)

1. What are personal protection equipments?
2. What are the signs of tetanus?
3. What are the common sources of infection?
4. What is ETO sterilization?
5. What are the modes of transmission of hepatitis B?
6. What is droplet transmission?
7. Name six disinfectants.
8. What is post exposure prophylaxis?
9. Name the causative organism of leptospirosis. How is the disease transmitted?
10. Name three bacterial infections.

DIPLOMA IN CRITICAL CARE TECHNOLOGY
SECOND YEAR
PAPER II – APPLIED MICROBIOLOGY & INFECTION CONTROL
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Q.P. Code: 841212

Time : Three Hours

Maximum : 100 Marks

Answer All questions.

I. Elaborate on:

(3 x 10 = 30)

1. Define Hospital Acquired infections and discuss the etiology and prevention of Ventilator Associated Pneumonia.
2. Discuss about Biomedical waste management and Management of needle stick injury.
3. Define Sterilisation and describe in detail about dry heat sterilization.

II. Write notes on:

(10 x 5 = 50)

1. Describe the moments of hand hygiene.
2. Routes of transmission of waterborne infection.
3. Hepatitis B infection.
4. Discuss on Leptospirosis.
5. Describe the management of Amoebiasis.
6. Aspergillus infection.
7. Personal protective equipment.
8. Acute diarrheal disease.
9. Environmental disinfection.
10. Influenza virus.

III. Short answers on:

(10 x 2 = 20)

1. Describe two types of filters used for sterilisation.
2. Mention the agents causing malaria.
3. Droplet nuclei.
4. Name two tests for HIV diagnosis.
5. Name two haemorrhagic fevers.
6. Name the causative organism and transmitting agent of endemic typhus.
7. Name two biological vectors.
8. Name two viruses transmitted through blood transmission.
9. Mention two agents causing UTI.
10. Prophylaxis of Tetanus.

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Q.P. Code: 841212

Time : Three Hours

Maximum : 100 Marks

Answer All questions.

I. Elaborate on:

(3 x 10 = 30)

1. Define Hospital Acquired infections and discuss the etiology and prevention of CLABSI (Catheter related Blood stream infections).
2. Define infection and discuss about routes of transmission of infection.
3. Discuss in detail about the critical care management of a patient with Dengue infection.

II. Write notes on:

(10 x 5 = 50)

1. Influenza Virus.
2. Routes of transmission of foodborne infection.
3. Chemical disinfectants.
4. Enteric fever.
5. Leptospirosis.
6. HIV infection.
7. Respiratory etiquette.
8. Safe injection practices.
9. Dehydration.
10. Management of infectious waste.

III. Short answers on:

(10 x 2 = 20)

1. Mention two Radiation agents used for sterilisation.
2. Name two stains used in Grams staining.
3. Define Carrier.
4. Tetanus toxoid.
5. Biofilm.
6. Sterilisation control.
7. Name two RNA viruses.
8. Define sterilisation.
9. Define Septicemia and Pyemia.
10. Name the causative organism and transmitting agent of epidemic typhus.

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

[LR 1220]

**DECEMBER 2020
(AUGUST 2020 EXAM SESSION)**

Sub. Code: 1212

DIPLOMA IN CRITICAL CARE TECHNOLOGY

SECOND YEAR – (Regulation from 2010 -2011)

**PAPER II – APPLIED MICROBIOLOGY & INFECTION CONTROL
INCLUDING CSSD
Q.P. Code: 841212**

Time : Three Hours

Maximum : 100 Marks

Answer All Questions.

I. Elaborate on:

(3 x 10 = 30)

1. Describe the various modes of Transmission of Infection with suitable examples.
2. Define Healthcare Associated Infection (HAI). List the various types of HAI. What are the various methods for their prevention?
3. Define Biomedical Waste. List the types of Biomedical waste generated in Hospital. Describe the methods of Segregation and Disposal.

II. Write notes on:

(10 x 5 = 50)

1. Carriers.
2. Standard precautions.
3. Hospital infection Control committee.
4. Spauldings classification.
5. Needle stick injury.
6. Prophylaxis for Hepatitis B.
7. Methods of Sterilisation and Disinfection in Operation theatres.
8. Prevention of Catheter Associated Urinary Tract Infection.
9. Plasma Sterilization.
10. Laboratory diagnosis of HIV infection.

III. Short answers on:

(10 x 2 = 20)

1. Define Epidemic. Give two examples.
2. Name two Microorganisms causing Urinary Tract Infection.
3. Name two device related infections in a Critically ill patient.
4. Airborne precautions.
5. Name four Personnel Protective Equipment.
6. List two Multidrug resistant organisms causing Infection.
7. Hand hygiene steps.
8. Pasteurisation.
9. Determination of Air quality in a Critical Care setting.
10. List two uses of Gluteraldehyde.

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

[AHS 0122]

JANUARY 2022

Sub. Code: 1212

(FEBRUARY 2021 & AUGUST 2021 EXAM SESSION)

DIPLOMA IN CRITICAL CARE TECHNOLOGY

SECOND YEAR – (Regulation from 2010 -2011)

PAPER II – APPLIED MICROBIOLOGY & INFECTION CONTROL INCLUDING CSSD

Q.P. Code: 841212

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Role of Infection control in Hospitals.
2. Describe the modes of transmission of HIV.
3. Gram Stain procedure.

II. Write notes on:

(10 x 5 = 50)

1. Needle stick injury.
2. Hepatitis B.
3. Chemical Disinfectants.
4. Difference between Emergent & Non Emergent Infections.
5. COVID – 19.
6. Collecting & Transporting of Clinical samples.
7. Color code for Bio-medical waste management.
8. Personal Protective Equipment.
9. Droplet Transmission Vs Vector Transmission.
10. Working mechanism of Autoclave.

III. Short answers on:

(10 x 2 = 20)

1. Name 2 Bacteria.
2. Causative organism for Tuberculosis.
3. Post Exposure prophylaxis.
4. Bowie and Dick test.
5. Name 2 Viral Infections.
6. What is the first and most important step in Infection control?
7. Which sterilization method is suitable for plastic items?
8. Vaccination.
9. Septicemia.
10. Name two diseases caused by spirochete.

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

[AHS 0222]

SEPTEMBER 2022

Sub. Code: 1212

(FEBRUARY 2022 & AUGUST 2022 EXAM SESSIONS)

**DIPLOMA IN CRITICAL CARE TECHNOLOGY
SECOND YEAR – (Regulation from 2010 -2011)
PAPER II – APPLIED MICROBIOLOGY & INFECTION CONTROL
INCLUDING CSSD
Q.P. Code: 841212**

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3x10 = 30)

1. Describe the modes of transmission of HBV.
2. Nosocomial Infection.
3. Describe in detail about chemical agent of Sterilization.

II. Write notes on:

(10 x 5 =50)

1. Role of Healthcare workers in Hospital Acquired Infections.
2. Isolation precaution.
3. Moist and Dry Heat Sterilization.
4. Working mechanism of Hot air oven.
5. Hand washing Techniques.
6. Signs and Symptoms associated with COVID -19.
7. Antiseptic Vs Disinfectants.
8. Hepatitis C.
9. Dengue Fever.
10. Tetanus.

III. Short answers on:

(10 x2 =20)

1. Name 2 Viruses.
2. Name any 2 Antibiotics.
3. Cross Infection.
4. Uses of Nasal Swab test.
5. Leptospirosis.
6. Types and uses of Detergent in decontamination.
7. Name 2 Bacterial Infections.
8. Agents causing food poisoning.
9. Symptoms of Tuberculosis.
10. Methods of blood collection.
