

[LL 0817]

AUGUST 2017

Sub. Code: 1237

B.Sc. CRITICAL CARE TECHNOLOGY
(New Syllabus 2014-2015)

THIRD YEAR

PAPER II – ICU THERAPY

Q.P. Code: 801237

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Classify oxygen delivery devices, elaborate on venturi device.
2. Describe the Basic life support algorithm. Enumerate the quality markers for good quality CPR.
3. List the initial ventilator settings for a patient with Chronic Obstructive Pulmonary Disease. Add a note on Auto-PEEP (air trapping). Describe the steps in troubleshooting a ventilator giving low tidal volume alarm.

II. Write notes on:

(8 x 5 = 40)

1. Management of tension pneumothorax.
2. Post resuscitation care.
3. Approach to patient with Poisoning.
4. Ventilator strategies in ARDS.
5. Endotracheal suctioning.
6. Incentive Spirometry.
7. Management of Ventricular Fibrillation.
8. Oxygen toxicity.

III. Short answers on:

(10 x 3 = 30)

1. List the different modes of Positive Pressure Ventilation.
2. Note on Anion Gap and its clinical implications.
3. Sellicks Maneuver.
4. What are the important tests to measure coagulation abnormalities?
5. List nebulized drugs used for bronchodilation.
6. Write briefly about universal precautions.
7. List the indications for mechanical ventilation.
8. Draw a 2-bottle chest drainage system.
9. Alarm limits on ventilator.
10. List the indications for renal replacement therapy (Dialysis).

[LM 0218]

FEBRUARY 2018

Sub. Code: 1237

B.Sc. CRITICAL CARE TECHNOLOGY
(New Syllabus 2014-2015 & 2015-2016)

THIRD YEAR

PAPER II – ICU THERAPY

Q.P. Code: 801237

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Describe the algorithm of Advanced Cardiac Life Support in case of ventricular fibrillation. Add a note of defibrillator safety.
2. Describe the approach for weaning a patient off mechanical ventilation. How will you check a patient's readiness for extubation?
3. Define circulatory shock. Enumerate the various types of circulatory shock. How will you manage a patient in septic shock?

II. Write notes on:

(8 x 5 = 40)

1. Low flow oxygen delivery devices.
2. Draw a 3 bottle chest drainage system.
3. Incentive spirometry.
4. Types of inhaled drug therapy, advantages/disadvantages of each type.
5. How would you trouble shoot a low pressure alarm on a ventilator?
6. Cricothyrotomy.
7. Hand Hygiene.
8. Manual in line stabilization.

III. Short answers on:

(10 x 3 = 30)

1. Indication and patient selection for Non Invasive Ventilation.
2. Management of Auto-PEEP.
3. List the drugs that can be used rapid sequence induction for intubations.
4. List the indications for renal replacement therapy (Dialysis).
5. List the different methods of thrombo-prophylaxis (prevention of DVT).
6. List the infection control practices used in ICU.
7. List the advanced modes of ventilation.
8. Types of humidifiers, advantages and disadvantages of each.
9. Definition of ventilator associated Pneumonia.
10. List the precautions for prevention of bed sores ICU patients.

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(New Syllabus 2014-2015 & 2015-2016)

THIRD YEAR

PAPER II – ICU THERAPY

Q.P. Code: 801237

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Define respiratory failure. List the causes of Type II respiratory failure and how you would manage a patient with Type II respiratory failure?
2. Outline the general supportive treatment in the management of organophosphorus compound poisoning. What are the steps to be taken when such a patient becomes hypoxic?
3. Describe management of Airway in an unconscious patient who does not have a definitive airway? Add a note on management of airway in patient with suspected cervical spine injury.

II. Write notes on:

(8 x 5 = 40)

1. Abdominal compartment syndrome.
2. Fluid resuscitation in circulatory shock.
3. Principles of Chest Physiotherapy in ICU patients.
4. Humidifier devices used in ICU.
5. Airway Pressure Release ventilation.
6. Troubleshooting high airway pressure/ pressure limitation alarms on ventilator.
7. Nutritional support in ICU patients.
8. Primary survey in trauma.

III. Short answers on:

(10 x 3 = 30)

1. List the causes of ventilator dependence.
2. Indications of IABP (Intra-Aortic Balloon Pump).
3. Toxidrome in Organophosphorus poisoning (S.L.U.D.G.E.)
4. List Drugs used in Advanced Cardiac Life Support.
5. List the steps in extubation of a patient.
6. Draw the sequence of Basic Life Support.
7. List the causes for difficulty in weaning a patient on ventilator.
8. List the types of nebulized drug delivery devices.
9. Write the initial settings of non-invasive ventilation for COPD exacerbation.
10. Drugs used in Rapid Sequence Intubation.

B.Sc. CRITICAL CARE TECHNOLOGY
(New Syllabus 2014-2015 & 2015-2016)

THIRD YEAR

PAPER II – ICU THERAPY

Q.P. Code: 801237

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Enumerate the Airway management for unconscious patient. Add a note on management of airway in patient with suspected cervical spine injury.
2. Explain in detail about Non-Invasive ventilation, Types, Goals and indications. Patient selection and exclusion criteria for NIV.
3. Explain in detail about Basic Life Support.

II. Write notes on:

(8 x 5 = 40)

1. Cricothyrotomy.
2. Weaning Criteria.
3. Write a notes in suctioning procedure.
4. Basics of Renal Replacement therapy.
5. Primary Survey in Trauma.
6. Write a notes on Pain control Measures.
7. Fluid and Electrolyte balance in burns patient.
8. Inspiratory resistant exercises.

III. Short answers on:

(10 x 3 = 30)

1. Methods of Weaning.
2. Care of surgical wounds.
3. Define Ventilation.
4. Define Proximal and Distal Airway.
5. List the precautions for prevention of bed sores ICU patients.
6. Define Ventilator associated pneumonia.
7. Management of AUTO-PEEP.
8. Define FiO₂.
9. Types of Ventilators.
10. Types of Shock.

B.Sc. CRITICAL CARE TECHNOLOGY
(New Syllabus 2014-2015 & 2015-2016)

THIRD YEAR

PAPER II – ICU THERAPY

Q.P. Code: 801237

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Outline the general supportive treatment on the management of Organo Phosphorous compound poisoning. What are the steps to be taken when such a patient becomes hypoxic?
2. Define Respiratory failure. List the causes of Type II Respiratory failure and how you would manage a patient with Type II respiratory failure?
3. Write in detail about Burns Assessment, Pathophysiology, Clinical Manifestations, Diagnosis and Treatment modalities.

II. Write notes on:

(8 x 5 = 40)

1. Manual in line stabilization.
2. Write notes on Tracheal intubation.
3. Basics of IABP.
4. Universal precautions.
5. Low flow Oxygen delivery devices.
6. Types of inhaled drug therapy, advantage of each type.
7. Fluid resuscitation in circulatory shock.
8. Trouble shooting high airway pressure / pressure limitation alarms on ventilator.

III. Short answers on:

(10 x 3 = 30)

1. Define abdominal compartment syndrome.
2. List the causes for difficulty in weaning a patient on ventilator.
3. Define Trauma. Three important steps in the golden hour.
4. Define Humidification.
5. Modes of Dialysis.
6. Basic care of fractures – Write any 4 steps.
7. Complications of NIV.
8. Draw the sequence of Basic Life Support.
9. Define work of breathing.
10. Hazards of aerosols therapy.

B.Sc. CRITICAL CARE TECHNOLOGY
(New Syllabus 2014-2015 & 2015-2016)

THIRD YEAR

PAPER II – ICU THERAPY

Q.P. Code: 801237

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Define renal replacement therapy. What are all the types of renal replacement therapy? Define Hemodialysis. Enumerate the principles of Hemodialysis and complications of Hemodialysis.
2. Define respiratory failure. What are all the indications and complications of the mechanical ventilation?
3. Define shock. What are the types of shock? Enumerate the management of circulatory shock.

II. Write notes on:

(8 x 5 = 40)

1. Define abdominal compartmental syndrome? What are the indications of the intra-abdominal pressure monitoring?
2. Explain and draw the three-bottle drainage system.
3. Manual in line stabilization.
4. Airway Pressure Release Ventilation (APRV).
5. Principles of chest physiotherapy.
6. Rule of nine in burns.
7. Universal precautions.
8. Automated External Defibrillator (AED).

III. Short answers on:

(10 x 3 = 30)

1. Indications of Intra-Aortic Balloon Pump (IABP).
2. Three causes of weaning from the mechanical ventilator.
3. Three causes of high airway pressure on the mechanical ventilator.
4. Drugs used in ACLS.
5. Three indications of non-invasive ventilation.
6. Draw the sequence of Basic Life Support (BLS).
7. Three advantages of humidification.
8. Three complications of suctioning.
9. Parenteral nutrition.
10. Golden hour.

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

[LR 1220]

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

Sub. Code: 1237

**BACHELOR IN CRITICAL CARE TECHNOLOGY
THIRD YEAR – (Regulation from 2014-2015 & 2015-16)
PAPER II – ICU THERAPY**

Q.P. Code: 801237

Time: Three Hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Outline the general supportive treatment on the management of Organo Phosphorous compound poisoning. What are the steps to be taken when such a patient becomes hypoxic?
2. Define circulatory shock. Enumerate the various types of circulatory shock. How will you manage a patient in septic shock?
3. Describe the algorithm of Advanced Cardiac Life Support in case of ventricular fibrillation. Add a note of defibrillator safety.

II. Write notes on:

(8 x 5 = 40)

1. Humidifier devices used in ICU.
2. Nutritional support in ICU patients.
3. Incentive spirometry.
4. Hand Hygiene.
5. Percutaneous Tracheostomy.
6. Draw 1 3 bottle chest drainage system.
7. Inotropes.
8. Care of Unconscious patient.

III. Short answers on:

(10 x 3 = 30)

1. List out drugs that can be used rapid sequence induction for intubation.
2. List the advanced modes of ventilation.
3. Types of Humidifier, advantages and disadvantages of each.
4. Indication and patient selection for Non-Invasive ventilation.
5. Classification of Burns.
6. Draw the sequence of Basic Life Support.
7. Toxidrome in Organo Phosphorous Poisoning (S.L.U.D.G.E).
8. Indications of IABP.
9. Define abdominal compartment syndrome.
10. Chest Physiotherapy principles.

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

[AHS 0122]

JANUARY 2022

Sub. Code: 1237

(FEBRUARY 2021 & AUGUST 2021 EXAM SESSION)

B.Sc. CRITICAL CARE TECHNOLOGY

THIRD YEAR (Regulations from 2014-2015, 2015-2016 & 2018-2019)

PAPER II – ICU THERAPY

Q.P. Code: 801237

Time: Three Hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Modes of Ventilation.
2. Weaning and Extubation.
3. Fluid resuscitation and Inotropes.

II. Write notes on:

(8 x 5 = 40)

1. Work of breathing.
2. Tidal volume.
3. Ventilator settings.
4. Care of Chest tube.
5. Pericardiocentesis.
6. Cricothyrotomy.
7. Humidification.
8. Incentive spirometry.

III. Short answers on:

(10 x 3 = 30)

1. MDI.
2. Modes of Dialysis.
3. Cuff pressure.
4. Terminal weaning.
5. FiO₂.
6. PEEP.
7. Dobutamine.
8. Adenosine.
9. Types of NIV.
10. Mask ventilation.

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

[AHS 0922]

SEPTEMBER 2022

Sub. Code: 1237

(FEBRUARY 2022 & AUGUST 2022 EXAM SESSIONS)

B.Sc. CRITICAL CARE TECHNOLOGY
THIRD YEAR (Regulations from 2014-2015, 2015-2016 & 2018-2019)
PAPER II – ICU THERAPY
Q.P. Code: 801237

Time: Three Hours

Answer ALL Questions

Maximum: 100 Marks

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

1. Classification, clinical manifestations and treatment of Burns.
2. Basics of renal replacement therapy.
3. Fibre optic bronchoscopy.

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

1. Therapeutic aerosols.
2. What are all ionotropes used in various types of shock in ICU patients?
3. Reasons for ventilator dependence.
4. Caring of ICD tubes and drain system in ICU.
5. Tracheostomy.
6. Basic life support.
7. Hand hygiene.
8. Extubation.

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

1. What is MILS and other methods for cervical stabilization?
2. Types of nebulizers.
3. Drugs used in ACLS and its dose.
4. ECMO.
5. Atropine.
6. Name two methods to decrease airway resistance.
7. Humidification.
8. Defibrillator.
9. Pressure support.
10. Confirmation of ET tube placement.

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

[AHS 0423]

APRIL 2023

Sub. Code: 1237

B.Sc. CRITICAL CARE TECHNOLOGY
THIRD YEAR (Regulations 2014-2015, 2015-2016 & 2018-2019 onwards)
PAPER II – ICU THERAPY
Q.P. Code: 801237

Time: Three Hours

Answer ALL Questions

Maximum: 100 Marks

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

1. Tracheal intubation.
2. Care of unconscious patient.
3. Ventilator settings.

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

1. Primary survey in trauma.
2. Advanced life support.
3. Suctioning and chest physiotherapy.
4. Abdominal compartment syndrome.
5. Manual inline stabilization.
6. Humidification.
7. Post extubation care.
8. Complications of NIV.

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

1. Indications for tracheostomy.
2. Dopamine.
3. Pressure sore.
4. Mask ventilation.
5. Salbutamol.
6. Epidural analgesia.
7. Cuff pressure and its importance.
8. Classification of burns and how will you assess the percentage of burns?
9. Modes of Dialysis.
10. Weaning and extubation.
