

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

[DM 0822]

AUGUST 2022

Sub. Code :1489

D.M. – CRITICAL CARE MEDICINE

**Paper IV – RECENT ADVANCES, EHTICS AND COMMUNICATION
ADMINSTRATION AND LEGAL ASPECTS**

Q.P. Code: 161489

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the neuroprotective measures you would employ in the management of traumatic brain injury. Critically appraise the role of prophylactic osmotherapy for moderate and severe traumatic brain injury patients.
2. Ergotrauma-discuss strategies and concepts that can be used to decrease ergotrauma.

II. Write notes on

(10x7=70)

1. Define “Open Disclosure” in the healthcare setting. Outline the general steps involved in “Open Disclosure”. Briefly discuss the importance of “Open Disclosure”.
2. As a newly appointed Intensive Care consultant, you are put in charge of Quality in your ICU. The infection control department informs you that your ICU has a higher than acceptable rate of central line associated blood stream infections (CLABSI).
 - a. Define CLABSI rate.
 - b. Outline your approach to this problem in terms of initial investigation and ongoing management and monitoring.
3. Discuss the role of extracorporeal blood purification in sepsis.
4. ‘Respiratory dialysis’: what does it mean, what are the indications and what is the evidence in favour of this modality?
5. In critically ill patients with acute altered level of consciousness and no recent seizures, discuss the role of continuous EEG (cEEG) compared to repeated routine EEG (rEEG) in your practice.

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6. Metabolic resuscitation in the ICU.
7. Requirements and recommendations to set up a 12-bedded level 3 ICU in a tertiary care hospital.
8. You are supervising a registrar who suffers a needle stick injury during the insertion of a central line in a patient with a history of intravenous drug use. Outline your approach to this problem.
9. Discuss the biomedical ethics in relation to end of life care in India.
10. Blood pressure lowering in stroke: current recommendations.

[DM 0822]

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

[DM 0124]

JANUARY 2024

Sub. Code :1489

D.M. – CRITICAL CARE MEDICINE

**PAPER IV – RECENT ADVANCES, ETHICS AND COMMUNICATION
ADMINISTRATION AND LEGAL ASPECTS**

Q.P. Code: 161489

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the global markers of tissue perfusion and their applications and limitations in the critically ill.
2. In the setting of trauma, discuss the general management of the exsanguinating patient in shock. Discuss the non-surgical options for the management of bleeding following pelvic trauma.

II. Write short notes on

(10 x 7 = 70)

1. Persistent inflammation, Immunosuppression, and catabolism syndrome (PICS).
2. Frailty and post ICU syndrome.
3. Discuss the role of conservative fluid administration and dereuscitation in critical illness.
4. Critically evaluate the timing of elective tracheostomy in ICU patients.
5. Three patients with diarrhoea, positive for *Clostridium difficile*, have been identified in your unit. Describe your approach to specific patient treatment and infection control and prevention strategies for this problem. Write a brief note on fecal microbial transplantation.
6. Discuss the mechanism of action, pharmacokinetics, and role of dexmedetomidine for sedation in mechanically ventilated patients.
7. Critically appraise the role of steroids for severe pneumonia.
8. Your intensive care unit has had a noticeable increase in the rate of Ventilator-Associated Pneumonia (VAP). Several cases involve multi-resistant organisms. Outline the strategies you would recommend implementing in your unit to reduce the incidence of VAP. Explain the rationale for each recommended quality improvement strategy in your answer.
9. What is stress index? How is this measured? What is its utility and how does it guide mechanical ventilation?
10. Critically evaluate the use of adjunctive corticosteroid treatment in the management of septic shock.

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

[DM 0225]

FEBRUARY 2025

Sub. Code :1489

D.M. – CRITICAL CARE MEDICINE

**PAPER IV – RECENT ADVANCES, ETHICS AND COMMUNICATION
ADMINISTRATION AND LEGAL ASPECTS**

Q.P. Code: 161489

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Define what is meant by level I, level II and level III ICUs. Briefly outline the principal considerations you should cover during the planning phase with specific attention to physical design of the unit and staffing.
2. Critically appraise the role of prophylactic osmotherapy for moderate and severe traumatic brain injury patients.

II. Write notes on:

(10 x 7 = 70)

1. Air transport of the critically ill patient.
2. Metabolic resuscitation in the ICU.
3. Grading and approach of GI failure in critically ill patients.
4. Define CLABSI and outline strategies to decrease central line associated blood stream infections.
5. Protective hemodynamics – Define and critically appraise the blood pressure target in critically ill patient.
6. Sepsis phenotypes, sub phenotypes and endotypes-role in current practice.
7. Critically evaluate the use of selective decontamination of the digestive tract (SDD) in the ICU.
8. Non-invasive ventilation for pre-oxygenation.
9. Endovascular thrombectomy for ischemic stroke.
10. Empiric antimicrobial therapy in patients with sepsis in the ICU-Principles and evidence.

D.M. – CRITICAL CARE MEDICINE

**PAPER IV – RECENT ADVANCES, ETHICS AND COMMUNICATION,
ADMINISTRATION AND LEGAL ASPECTS**

Q.P. Code: 161489

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. What are the pros and cons of restrictive transfusion policy in the critically ill patient? Discuss the evidence of this strategy in the setting of acute myocardial injury, post cardiac surgery and acute brain injury.
2. Critically appraise the role of Tranexamic acid in trauma and post-partum hemorrhage.

II. Write notes on:

(10 x 7 = 70)

1. Inhalational sedation in the ICU.
2. Discuss the biomedical ethics in relation to end of life care in India.
3. E-CPR.
4. Describe the role of a progressive mobility program in ICU patients.
5. Humanising Intensive Care.
6. Critically appraise the role of proteins in nutritional therapy of the ICU patient.
7. Outline the role and evidence of high flow nasal cannula and NIV in acute respiratory failure.
8. Severity of Illness scoring systems in the ICU.
9. Newer biomarkers in sepsis.
10. ICU triage principles, bed allocation policies, and ethical considerations in resource-limited settings.
