

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

**[DM 0124]**

**JANUARY 2024**

**Sub. Code :1487**

**D.M. – CRITICAL CARE MEDICINE  
PAPER II – GENERAL CRITICAL CARE  
*Q.P. Code: 161487***

**Time: Three Hours**

**Maximum: 100 Marks**

**I. Elaborate on: (2 x 15 = 30)**

1. Define massive pulmonary embolism. Discuss the advantages and disadvantages of thrombolysis, catheter directed clot removal and surgical embolectomy, in the treatment of massive pulmonary embolism.
2. Outline the ICU management of a 25-year-old male who has fulfilled brain death criteria and is awaiting surgery for organ donation.

**II. Write short notes on: (10 x 7 = 70)**

1. Discuss the advantages and disadvantages of techniques for assessing fluid responsiveness.
2. Define delirium. Outline your approach to the diagnosis and prevention of delirium in patients in your ICU.
3. With respect to standard adult ALS algorithm needed in the management of cardiac arrest in the following clinical situations. Give the rationale for the modifications where appropriate.
  - a) A 72-year-old female ventilated in ICU 4 hours post-cardiac surgery.
  - b) A 66-year-old male with accidental hypothermia and core temperature < 24°C.
  - c) A 34-year-old 32/40 gestation pregnant female.
4. With respect to nutritional support in the critically ill: Outline how you would assess the nutritional status of a patient with suspected malnutrition. Prescribe an initial diet for such a patient with the rationale.
5. A 55-year-old female is admitted to your ICU with severe respiratory failure caused by a community acquired pneumonia. She has a history of rheumatoid arthritis. What factors related to her rheumatoid arthritis require consideration during her care in the ICU?
6. A 74-year-old male has been intubated for respiratory failure developing two weeks after oesophagectomy for adenocarcinoma. He has no other significant past medical history. After intubation, an audible air leak was apparent. Urgent bronchoscopy demonstrated a fistula between the proximal left main bronchus and the oesophago-gastric anastomosis. Outline the principles and priorities in the management of this patient.

7. With reference to fat embolism syndrome (FES), outline the precipitants, clinical features, diagnosis and management.
8. Outline the therapeutic options with rationale for the treatment of right ventricular dysfunction in an ICU patient.
9. Biomarkers for fungal infection.
10. With respect to positive end-expiratory pressure (PEEP) in a ventilated patient with acute respiratory distress syndrome (ARDS):
  - a) Describe the possible approaches to setting PEEP.
  - b) List the disadvantages of excessive PEEP in this situation.

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