

Question Paper

Exam Date & Time: 07-Dec-2021 (02:30 PM - 04:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER B.Sc. RESPIRATORY THERAPY DEGREE EXAMINATION - DECEMBER 2021
SUBJECT: BRES 301 - MECHANICAL VENTILATION I
(2016 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) A 40-year-old male patient with an ideal body weight of 70 kg, diagnosed with pancreatitis in breathing difficulty severe hypoxemia was intubated. The chest X-ray showed diffuse bilateral coalescent infiltrates. Select the mode and appropriate settings for managing this patient. Briefly explain the techniques to improve oxygenation in patients with ARDS. (10)
(5+5 = 10 marks)
- 2) Write a note on the Swan-Ganz catheter with a diagram. What are the insertion sites for the Pulmonary Artery catheter? List the complications associated with Pulmonary Artery Catheterization. (10)
(5+2+3 = 10 marks)
- 3A) Briefly explain the West's zones of the lung. (5)
- 3B) Write in detail about static and dynamic compliance. (5)
- 3C) Write a note on ventilator alarms with the different levels of alarms. (5)
- 3D) What is iatrogenic hyperventilation? (5)
- 4A) Explain how flow triggering is faster as compared to pressure triggering. (2)
- 4B) Draw a volume-time graph to identify leaks in the ventilator system during invasive ventilation. (2)
- 4C) Mention two indications for use of CPAP in adults. (2)
- 4D) Write two contraindications to use of Heat Moisture Exchangers for ventilated patients. (2)
- 4E) List the components of the external pneumatic circuit. (2)

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Question Paper

Exam Date & Time: 11-Dec-2021 (02:30 PM - 04:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER B.Sc. RESPIRATORY THERAPY DEGREE EXAMINATION - DECEMBER 2021
SUBJECT: BRES 305 - NEONATAL RESPIRATORY CARE
(2016 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Explain each steps of resuscitation for a high risk delivery of 32 weeks of gestation with an expected weight of 1250g. (10)
- 2) Classify meconium aspiration syndrome(MAS). Add a note on the MAS pathophysiology. (10)
(5+5 =10 marks)
- 3A) Define Apnea. Add a note on obstructive apnea. (5)
- 3B) Define Bronchopulmonary dysplasia. Enlist two factors that contribute to the development of BPD. (5)
- 3C) Write in detail about the different types of tracheoesophageal fistula. (5)
- 3D) Explain in detail about the management of a preterm with RDS. (5)
- 4A) Enlist the four ways through which a newborn loses body heat. (2)
- 4B) Enlist any two factors that can lead to pulmonary haemorrhage in neonates. (2)
- 4C) Enlist the cyanotic congenital heart disease. (2)
- 4D) Enlist two complications of exogeneous surfactant therapy in RDS. (2)
- 4E) Enlist the two indications for CPAP therapy. (2)

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Question Paper

Exam Date & Time: 14-Dec-2021 (02:30 PM - 04:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER B.Sc. RESPIRATORY THERAPY DEGREE EXAMINATION - DECEMBER 2021
SUBJECT: BRES 307 - CRITICAL CARE MONITORING AND MANAGEMENT
(2016 SCHEME)

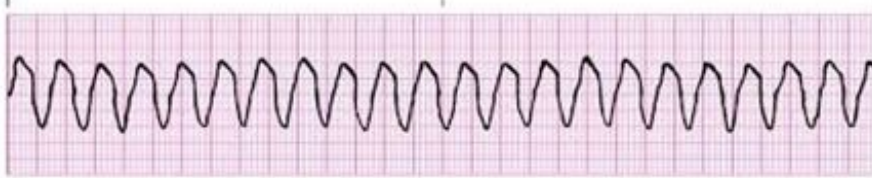
Marks: 50

Duration: 120 mins.

Answer all the questions.

Long answer question. Draw diagrams as necessary

1. A 59 year- old man recovering from coronary artery bypass graft (CABG) surgery, presents with blood pressure drop to 40/10 mm Hg on arrival to the recovery room and the ECG monitor reveals this pattern shown below:



- 1A) Interpret this ECG. (1)
- 1B) Write the etiology of this ECG development. (3)
- 1C) How will you manage this patient? (6)
- 2) Write two conditions where you clamp ICD tubes and explain about underwater seal systems with help of diagram. (10)
(2+8 = 10 marks)
3. Short notes:
- 3A) Define CKD and brief about its management. (5)
- 3B) Write note on pathophysiology of cardiogenic shock. (5)
- 3C) Normal CVP tracing. (5)
- 3D) Write the classification, indications and mechanism of action of Dopamine. (5)
(1+2+2 = 5 marks)
4. Very short notes:
- 4A) Define flail chest. (2)

- 4B) Mention two causes for neurogenic shock. (2)
- 4C) Mention two indications of CABG. (2)
- 4D) Name two antiarrhythmic drugs. (2)
- 4E) List any two risk factors for stroke. (2)

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