

**MANIPAL ACADEMY OF HIGHER EDUCATION****SECOND YEAR M.Sc. (RESPIRATORY THERAPY) DEGREE EXAMINATION- MAY/JUNE 2018****SUBJECT: CRITICAL CARE MEDICINE – II  
(SPECIALTY: ADULT CARDIO RESPIRATORY CARE)  
(2013 BATCH)**

Friday, June 01, 2018

Time: 10:00 – 13:00 Hrs.

Max. Marks: 80

✍ **Answer ALL the questions.**

✍ **Draw diagrams wherever necessary.**

1. Define acute liver failure and list down the aetiology. Discuss on the pathophysiology and management of acute liver disease.

(2+3+6+5 = 16 marks)

2. Discuss on the different types of life threatening arrhythmias and mention the treatment of each.

(16 marks)

3. **Short notes:**

3A. Pathophysiology of Myasthenia Gravis (MG).

(8 marks)

3B. Management of cerebral edema.

(8 marks)

3C. Discuss on the clinical features and pathophysiology of infective endocarditis.

(4+4 = 8 marks)

3D. List the types of renal failure. Add a note on management of Acute renal failure.

(3+5 = 8 marks)

3E. Define shock. Discuss on the types of shock.

(2+6 = 8 marks)

3F. Clinical features and management of hyperkalemia.

(3+5 = 8 marks)



**MANIPAL ACADEMY OF HIGHER EDUCATION**

SECOND YEAR M.Sc. (RESPIRATORY THERAPY) DEGREE EXAMINATION- MAY/JUNE 2018

**SUBJECT: CRITICAL CARE MEDICINE – II**  
(SPECIALTY: NEONATAL & PEDIATRIC RESPIRATORY CARE)  
(2013 REGULATION)

Friday, June 01, 2018

Time: 10:00 – 13:00 Hrs.

Max. Marks: 80

✍ **Answer ALL the questions.**✍ **Draw diagrams where necessary.**

1. A 3 day old baby is presented to NICU with respiratory distress. The preductal oxygen saturation is reading 92% and postductal saturation is reading 83%. The pulses are well felt in upper limbs where as in lower limbs it is feeble. The apex of heart is in the 6<sup>th</sup> intercostals space. Hyperoxia test is negative. What is the likely diagnosis of this baby? Reason why the baby would present with such problems on the 3<sup>rd</sup> day of life. What precautions are to be taken and what immediate complications are looked for? Discuss the ventilator management for post surgery and the care required in intensive care unit.

(2+4+2+8 = 16 marks)

2. A child is presented to triage with organophosphorus poisoning. What is the management of this patient and discuss in detail the long term effect and complications to be looked for?

(16 marks)

3. **Write short notes on:**

3A. Add a note on central hypoventilation syndrome and its treatment.

(4+4 = 8 marks)

3B. List the cyanotic and acyanotic congenital heart defects.

(8 marks)

3C. What is the normal range of serum potassium and serum sodium? Discuss in detail the treatment for hyperkalemia and the complication associated with this derangement.

(1+1+4+2 = 8 marks)

3D. Discuss the clinical features of a child in congestive cardiac failure. What treatment guidelines are followed in CCF?

(6+2 = 8 marks)

3E. Management of burn victim in PICU.

(8 marks)

3F. Add a note on meningitis.

(8 marks)



**MANIPAL ACADEMY OF HIGHER EDUCATION****SECOND YEAR M.Sc. (RESPIRATORY THERAPY) DEGREE EXAMINATION- MAY/JUNE 2018****SUBJECT: ADVANCED PULMONARY REHABILITATION INCLUDING POLYSOMNOGRAPHY  
(SPECIALIZATION: ADULT CARDIO RESPIRATORY CARE / NEONATAL & PAEDIATRIC RESPIRATORY CARE)  
(2013 BATCH)**

Monday, June 04, 2018

Time: 10:00 – 13:00 Hrs.

Max. Marks: 80

✍ **Answer ALL the questions.**

✍ **Long Notes:**

1. Define pulmonary rehabilitation. Describe the patient selection and assessment for pulmonary rehabilitation and also the goal development and rehabilitation potential for the same.

(2+4+4+6 = 16 marks)

2. Define CSA. Explain the pathophysiology, causes and treatment for the same.

(2+4+4+6 = 16 marks)

3. **Short notes:**

3A. Emergency procedures during walk test.

3B. Treatment for tobacco dependence.

3C. Lung transplantation.

3D. Rehabilitation in Pulmonary hypertension.

3E. Role of Respiratory Therapist in rehabilitating patients with interstitial lung disease.

3F. Exercise assessment.

(8 marks × 6 = 48 marks)



Reg. No.

# MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND YEAR M.Sc. (RESPIRATORY THERAPY) DEGREE EXAMINATION- MAY/JUNE 2018

**SUBJECT: MANAGEMENT IN RESPIRATORY CARE**

(SPECIALTY: ADULT CARDIO RESPIRATORY CARE / NEONATAL & PAEDIATRIC RESPIRATORY CARE)  
(2013 BATCH)

Wednesday, June 06, 2018

Time: 10:00 – 11:30 Hrs.

Max. Marks: 40

✍ **Answer ALL the questions.**

1. Critically examine the management principles of Henry Fayol and F.W. Taylor.  
(10 marks)
2. How does the Trait and Behavioral theory of leadership differ from each other?  
(10 marks)
3. **Write short notes on the following:**
  - 3A. Steps in Counselling process
  - 3B. Perceptual selectivity
  - 3C. Types of Wage Incentive Plans
  - 3D. Types of Recruitment

(5 marks × 4 = 20 marks)



**MANIPAL ACADEMY OF HIGHER EDUCATION****SECOND YEAR M.Sc. (RESPIRATORY THERAPY) DEGREE EXAMINATION -MAY/JUNE 2018****SUBJECT: ADVANCED RESPIRATORY SCIENCE – II****(SPECIALIZATION: ADULT CARDIO RESPIRATORY CARE / NEONATAL & PEDIATRIC RESPIRATORY CARE)  
(2013 BATCH)**

Monday, May 28, 2018

Time: 10:00 – 13:00 Hrs.

Max. Marks: 80

✍ **Answer ALL the questions.**

✍ **Draw diagram wherever necessary.**

1. Ventilatory graphics has gained its importance in assessing patient's condition and patient ventilator synchrony. Discuss the volume and pressure control graphical presentation and add a note on the changes in waveforms with changes in lung characteristic.

(4+4+8 = 16 marks)

2. What are the types of High frequency ventilation, Explain the mechanism of gas exchange in HFOV. Enumerate the indications, contraindications of HFOV. Explain how do you arrange the ventilatory settings on HFOV when there is (i) worsening of oxygenation (ii) worsening of ventilation.

(2+4+2+4+4 = 16 marks)

3. **Short Notes:**

- 3A. Proportional Assist Ventilation.  
3B. Davenport Nomogram.  
3C. Indirect calorimetry and metabolic measurements.  
3D. Effects of mechanical ventilation on haemodynamic monitoring.  
3E. Severinghaus and Sanz electrode.  
3F. What are your views to improve home mechanical ventilation?

(8 marks × 6 = 48 marks)



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# MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND YEAR M.Sc. (RESPIRATORY THERAPY) DEGREE EXAMINATION- MAY/JUNE 2018

**SUBJECT: EMERGENCY MEDICAL SERVICES**

(SPECIALTY: ADULT CARDIO RESPIRATORY CARE)

(2013 BATCH)

Wednesday, May 30, 2018

Time: 10:00 – 13:00 Hrs.

Max. Marks: 80

 **Answer ALL the questions.**

1. Discuss the management of Acute Stroke.

(16 marks)

2. Discuss the causes and management of heart block. Add a note on transcutaneous pacing?

(8+8 = 16 marks)

3. **Write short note on:**

3A. CPR in pregnancy

3B. Sodium bicarbonate

3C. Asystole management

3D. Vasopressin

3E. Basic life support in infants

3F. Defibrillation

(8 marks × 6 = 48 marks)



Reg. No.

# MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND YEAR M.Sc. (RESPIRATORY THERAPY) DEGREE EXAMINATION- MAY/JUNE 2018

**SUBJECT: EMERGENCY MEDICAL SERVICES**  
(SPECIALTY: NEONATAL & PAEDIATRIC RESPIRATORY CARE)  
(2013 BATCH)

Wednesday, May 30, 2018

Time: 10:00 – 13:00 Hrs.

Max. Marks: 80

✍ **Answer ALL the questions.**

✍ **Draw diagram wherever necessary.**

1. Discuss in detail about the approach to a pediatric trauma victim at an electrical site.  
(16 marks)
2. Explain the steps of NRP algorithm for a preterm neonate at 28 weeks with expected weight of 900gms. How will you manage this scenario if it has to be shifted to NICU?  
(10+6 = 16 marks)
3. **Write short notes on:**
  - 3A. Enlist the types of shocks with the salient features of each.  
(8 marks)
  - 3B. Discuss the drugs epinephrine and dopamine.  
(4+4 = 8 marks)
  - 3C. Discuss the steps of rapid sequence intubation.  
(8 marks)
  - 3D. Add a note on self inflating bag.  
(8 marks)
  - 3E. Discuss the chain of survival of pediatric BLS.  
(8 marks)
  - 3F. Discuss about the nasopharyngeal airway and oropharyngeal airway.  
(8 marks)

