

[LJ 0816]

AUGUST 2016

Sub.Code :2613

B.Sc. RESPIRATORY THERAPY
SECOND YEAR
PAPER III – DIAGNOSTIC TECHNIQUES IN CARDIO
RESPIRATORY DISEASES

Q.P. Code: 802613

Time: Three Hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on:

(3 x 10 = 30)

1. Pressure Volume Loop – Theory behind its use for defining PEEP.
2. Obstructive Sleep Apnea – Diagnosis and Management.
3. Role of Arterial Blood Gas in a dyspneic patient in Emergency.

II. Write Notes on:

(8 x 5 = 40)

1. Define Techniques for performing Spirometry.
2. Role of Bedside ECHO in ICU.
3. Demonstration of Auto – PEEP from Ventilator Graphics.
4. Define Post Bronchodilator Reversibility.
5. Common difficulties while performing Pulmonary Function Testing.
6. Clinical Scenarios where Pulseoximetry is misleading.
7. What are the structures visualised on Chest X – ray?
8. When will you perform Diffused Lung Carbon Monoxide in a patient?

III. Short Answers on:

(10 x 3 = 30)

1. Relevance of Chest X – Ray in 2016.
2. Epworth Scoring System for suspected Obstructive Sleep Apnea.
3. What are the advantages of Body Plethysmography over Simple Spirometry?
4. Define Residual Volume and how to detect Residual Volume?
5. What are the five common abnormalities diagnosed on seeing Electrocardiogram?
6. Define Forced Vital Capacity.
7. Parameters monitored in Treadmill Test.
8. Illustrate Peak Pressure and Plateau pressure in Pressure Time Graph.
9. Define Metabolic Acidosis and give some causes for same.
10. How do you detect Upper Airway obstruction by Flow Volume Loop?

[LK 0217]

FEBRUARY 2017

Sub.Code :2613

B.Sc. RESPIRATORY THERAPY
SECOND YEAR
PAPER III – DIAGNOSTIC TECHNIQUES IN CARDIO
RESPIRATORY DISEASES

Q.P. Code: 802613

Time: Three Hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on:

(3 x 10 = 30)

1. Common causes for respiratory Acidosis and how do you manage them?
2. Draw subdivisions of Lung Volume Recorded by Spirometer and define each one.
3. Compare and Contrast Pros and Cons of Arterial Blood Gas and Pulseoximetry.

II. Write Notes on:

(8 x 5 = 40)

1. How do you define Obstruction by spirometry and Classify Severity?
2. Sleep Stages.
3. Importance of doing DLCO.
4. How does Continuous Positive Airway Pressure help in Obstructive Sleep Apnea?
5. Five common abnormalities what can be diagnosed on Chest X Ray.
6. How does Pulseoximetry Work?
7. When would you do contrast CT of chest?
8. Precautions in MRI.

III. Short Answers on:

(10 x 3 = 30)

1. What are the common mistakes while performing PFT?
2. Define FEV₁.
3. Define Maximal Voluntary Ventilation.
4. Define dead space and its components.
5. Draw FVC maneuver and label its components.
6. Pressure Time Graph in Volume Controlled Ventilation.
7. Draw Normal ECG and label its waves.
8. What is the physiological basis for doing Treadmill Test?
9. Define small airway and mention test to detect abnormality.
10. Advantages of finding Base Excess in ABG.

B.Sc. RESPIRATORY THERAPY**SECOND YEAR****PAPER III – DIAGNOSTIC TECHNIQUES IN CARDIO
RESPIRATORY DISEASES***Q.P. Code: 802613***Time: Three Hours****Maximum : 100 Marks****Answer All questions****I. Elaborate on:****(3 x 10 = 30)**

1. Electrocardiography – Features of a Normal waveform and Steps in Interpretation.
2. Body Plethysmography – Technique and Significance.
3. Anion gap – Definition, Causes, High Anion Gap Acidosis, Mixed Anion Gap Acidosis and Non Anion Gap acidosis.

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

1. Steps in Interpreting Arterial Blood Gas Report.
2. Abnormal waveforms of a Capnography and Treatment.
3. Gas Dilution Techniques for Measuring Functional residual capacity.
4. Diagnostic Criteria and Management of Obstructive Sleep Apnea.
5. Transthoracic ECHO and Probe positions.
6. Pressure Volume Loop.
7. Henderson Hasselbach Equation.
8. Pitfalls of Pulseoximetry.

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

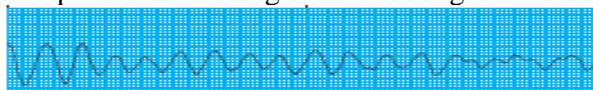
1. Clinical Monitoring during Treadmill.
2. Volume Time Graph.
3. Spontaneous Mode, Continuous Positive Airway Pressure Mode, Continuous Positive Airway Pressure + Pressure Support Mode.
4. Precautions to be taken before Magnetic Resonance Imaging.
5. A 25 year old man with no significant past medical history presents to EMR with H/O fever x 2 days, productive cough and worsening dyspnea. His ABG pH – 7.50, pCO₂ – 28.1 mmHg, pO₂ – 57.8 mmHg, HCO₃ – 23.9 mmol/l.
6. A 34 year old morbidly obese female with a BMI of 49 has an ABG taken as a part of her preoperative assessment for weight reduction surgery. Her ABG pH – 7.38, pCO₂ – 54.8 mmHg, pO₂ – 72.2 mmHg, HCO₃ – 23 mmol/l, BE 3.8, SpO₂ – 96%.
7. A 77 year old female is admitted to stroke ward with right sided weakness, visual disturbance and slurred speech. She is commenced on Naso Gastric Tube due to swallowing difficulties but has a large vomit 24 hours later. She initially appears well but over next few hours, develops worsening breathing difficulties. Her ABG pH 7.41, pCO₂ – 33.2 mmHg, pO₂ – 65 mmHg, HCO₃ – 21.1 mmol/l, SpO₂ – 92.7%.
8. Interpret the following Electrocardiogram and Mention their features



9. Interpret the following Electrocardiogram and Mention their features



10. Interpret the following Electrocardiogram and Mention their features



B.Sc. RESPIRATORY THERAPY

SECOND YEAR

**PAPER III – DIAGNOSTIC TECHNIQUES IN CARDIO
RESPIRATORY DISEASES**

Q.P. Code: 802613

Time: Three Hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on:

(3 x 10 = 30)

1. Role of Spirometry in assessment of patients presenting with breathing difficulty.
2. Limited channel sleep study.
3. Thoracoscopy.

II. Write Notes on:

(8 x 5 = 40)

1. FENO.
2. N-terminal Pro B type Natriuretic Peptide.
3. Echocardiogram in Pulmonary Diseases.
4. ECG monitoring in ICU / HDU.
5. Bronchoalveolar Lavage.
6. Diffusion capacity.
7. Leak test in Bronchoscopy.
8. Investigations to confirm the diagnosis of Pneumothorax.

III. Short Answers on:

(10 x 3 = 30)

1. Sputum smear for AFB.
2. Causes of Failure to record SpO₂ by Pulse Oximeter.
3. ABG findings in Type 2 Respiratory failure.
4. BODE index.
5. Diagnostic utility of Chest Ultrasound in ICU.
6. ABG findings in Obesity hypoventilation syndrome.
7. Nocturnal Pulse Oxymetry.
8. Steps in Disinfection of Bronchoscope.
9. Indications of Thoracoscopy.
10. Indications of Radial EBUS.

B.Sc. RESPIRATORY THERAPY

SECOND YEAR

**PAPER III – DIAGNOSTIC TECHNIQUES IN CARDIO
RESPIRATORY DISEASES**

Q.P. Code: 802613

Time: Three Hours

Maximum : 100 Marks

Answer All questions

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

1. Allergic skin test.
2. Polysomnography.
3. AutoCPAP trial.

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

1. Maximum Mid expiratory flow rate (MMEF).
2. DLCO / VA.
3. Residual volume.
4. Transbronchial lung biopsy.
5. ECG findings in Ventricular arrhythmias.
6. EBUS TBNA.
7. Ultrasound chest signs for diagnosis of Pleural effusion.
8. ECG findings in Cor pulmonale.

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

1. XPERT MTB Rif.
2. Contraindications of Cardiopulmonary Exercise test.
3. Venous Blood Gas.
4. Role of Lower limit of Normal volumes in Spirometry.
5. Draw a Flow volume graph showing insufficient effort during spirometry.
6. Compliance test for Patient using CPAP.
7. Write names of two types of culture for Mycobacterium tuberculosis.
8. Two indications for Induced Sputum test.
9. How to measure Mantoux test result?
10. Instructions to patient prior to bronchoscopy.

B.Sc. RESPIRATORY THERAPY

SECOND YEAR

**PAPER III – DIAGNOSTIC TECHNIQUES IN CARDIO
RESPIRATORY DISEASES**

Q.P. Code: 802613

Time: Three Hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on:

(3 x 10 = 30)

1. Role of ABG in Respiratory Failure.
2. Bronchoprovocation test.
3. Sputum induction test.

II. Write Notes on:

(8 x 5 = 40)

1. Radial EBUS.
2. Ultrasound chest signs for diagnosis of Pneumothorax.
3. Apnea Hypopnea Index.
4. Transbronchial needle (TBNA) aspiration cytology for mediastinal lymph nodes.
5. Ultrasound guided Pleural biopsy.
6. Function Residual Volume.
7. Bronchial biopsy.
8. Total Lung capacity.

III. Short Answers on:

(10 x 3 = 30)

1. Contraindications of Bronchoscopy.
2. Indications of EBUS TNBA.
3. Indications of Medical Thoracoscopy.
4. Contraindications of Medical Thoracoscopy.
5. Draw a Flow Volume graph showing cough during Spirometry maneuver.
6. Contraindications of Spirometry.
7. Write name of two tests to assess small airway disease.
8. Name of Allergic skin test for Allergic Bronchopulmonary Aspergillosis.
9. Indications for Cardiopulmonary Exercise test.
10. FEV6.

B.Sc. RESPIRATORY THERAPY

SECOND YEAR

**PAPER III – DIAGNOSTIC TECHNIQUES IN CARDIO
RESPIRATORY DISEASES**

Q.P. Code: 802613

Time: Three Hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on:

(3 x 10 = 30)

1. Limited Channel Sleep study.
2. Pulse Oximetry.
3. Diffusion Capacity.

II. Write Notes on:

(8 x 5 = 40)

1. Role of Treadmill test in a patient presenting with off and on chest pain on climbing stairs.
2. Capnography.
3. Role of Chest X-ray in diagnosis the of Tuberculosis.
4. Enumerate and draw various kinds of Flow Volume loops in Spirometry.
5. Role of Respiratory drive in assessment of patient presenting with breathlessness.
6. FENO (Fraction of nitric oxide in expired air).
7. ECG monitoring in ICU / HDU.
8. Role of Echocardiography in patient presenting with breathing difficulty.

III. Short Answers on:

(10 x 3 = 30)

1. AutoPEEP.
2. Chest X ray sings of Lobar Collapse.
3. Indications of MRI chest.
4. Two examples of Diagnostic utility of Chest Ultrasound in ICU.
5. ABG findings in Obesity hypoventilation syndrome.
6. ECG findings in a patient with Myocardial infarction.
7. Echocardiography findings in a patient presenting with Acute Pulmonary Embolism and low blood pressure.
8. Causes of Respiratory Alkalosis.
9. Use of PEFr in monitoring of Asthma.
10. Slow vital Capacity.

B.Sc. RESPIRATORY THERAPY

SECOND YEAR

**PAPER III – DIAGNOSTIC TECHNIQUES IN CARDIO
RESPIRATORY DISEASES**

Q.P. Code: 802613

Time: Three Hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on:

(3 x 10 = 30)

1. Capnography and capnometry during mechanical ventilation.
2. Methacholine challenge test.
3. Enumerate and define different pulmonary function measurements obtained with spirometry.

II. Write Notes on:

(8 x 5 = 40)

1. Nocturnal pulse oxymetry.
2. CT thorax findings in patient with bronchiectasis.
3. Nitrogen washout technique.
4. Continuous positive airway pressure ventilation.
5. Six min walk test.
6. Residual volume.
7. Chest X ray findings in a case with lung cancer.
8. Epworth sleepiness scale.

III. Short Answers on:

(10 x 3 = 30)

1. Anion gap.
2. Chest X ray signs of pneumothorax.
3. Draw flow volume loops of spirometry in a patient with tracheal tumour.
4. Causes of metabolic acidosis.
5. Write an ABG findings showing type two respiratory failure.
6. Helium dilution technique.
7. CPAP compliance.
8. ABG in diabetic ketoacidosis.
9. Anatomical and physiologic dead space.
10. FEF 25% - 75%.

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

[AHS 0321]

MARCH 2021

Sub. Code: 2613

(AUGUST 2020 EXAM SESSION)

B.Sc. RESPIRATORY THERAPY

SECOND YEAR (Regulation 2014-2015)

PAPER III – DIAGNOSTIC TECHNIQUES IN CARDIO RESPIRATORY DISEASES

Q.P. Code : 802613

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Role of Spirometry in evaluation of a patient presenting with Breathlessness.
2. Body Plethysmography.
3. Limited Channel Sleep study.

II. Write Notes on:

(8 x 5 = 40)

1. Pulse Oximetry – Principle and Utility.
2. CT Pulmonary Angiogram findings in a case with Pulmonary Embolism.
3. Chest X ray findings in a case with Lung cancer.
4. FRC.
5. Helium Dilution technique.
6. Bronchoprovocation test.
7. Airway pressure release ventilation.
8. PEFr.

III. Short Answers on:

(10 x 3 = 30)

1. Anion gap.
2. Chest X ray signs of Pneumothorax.
3. Draw Flow Volume loops of Spirometry in a patient with Tracheal tumour.
4. Causes of Metabolic Acidosis.
5. Write an ABG findings showing Type 2 Respiratory failure.
6. Apnea Hypopnea Index.
7. CPAP compliance.
8. ABG in Diabetic Ketoacidosis.
9. Anatomical and Physiologic dead space.
10. FEF 25% - 75%.

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

[AHS 0222]

**FEBRUARY 2022
(AUGUST 2021 EXAM SESSION)**

Sub. Code: 2613

**B.Sc. RESPIRATORY THERAPY
SECOND YEAR (Regulation 2014-2015)
PAPER III – DIAGNOSTIC TECHNIQUES IN CARDIO RESPIRATORY DISEASES
Q.P. Code : 802613**

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Polysomnography.
2. Pulse Oximetry.
3. Describe the purpose and techniques used to measure diffusing capacity(DLCO).

II. Write Notes on:

(8 x 5 = 40)

1. Causes of High Anion Gap Metabolic Acidosis.
2. Equipments needed for Arterial Blood gas Sampling.
3. Indications and Contraindications to Pulmonary Function Testing.
4. Write down the Anatomic Structures Seen on a Chest X-Ray.
5. Advantages and Disadvantages of Sidestream Capnometers.
6. Computed Tomography of the Chest
7. Radiographic signs of Pulmonary Embolism.
8. Role of ultrasound in chest.

III. Short Answers on:

(10 x 3 = 30)

1. Name the Arteries involved in Arterial blood gas (ABG) sampling.
2. Draw a flow-volume loop.
3. Role of Echocardiography in Respiratory diseases.
4. Zones in PEFV monitor (wright's Peak flow meter).
5. Placement of Chest Leads for ECG.
6. Radiographic Features of Interstitial Lung Diseases.
7. Draw flow volume loops of spirometry in a patient with tracheal tumour.
8. Define sleep apnea.
9. Treadmill Test.
10. Draw Normal single-breath capnograph tracing.

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

[AHS 0922]

SEPTEMBER 2022
(FEBRUARY 2022 & AUGUST 2022 EXAM SESSIONS)

Sub. Code: 2613

B.Sc. RESPIRATORY THERAPY
SECOND YEAR (Regulation from 2014-2015)
PAPER III – DIAGNOSTIC TECHNIQUES IN CARDIO
RESPIRATORY DISEASES
Q.P. Code : 802613

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Discuss about the values obtained during spirometry and interpret the same in Respiratory Diseases.
2. Write about 12- Lead ECG and steps that should be followed in interpreting the ECG.
3. Arterial Blood Gas Analysis – Write about the basic procedure for radial artery puncture in adults, clinical indications and pre-analytic errors associated with arterial blood sample.

II. Write notes on:

(8 x 5 = 40)

1. Describe bronchodilator responsiveness and discuss its importance.
2. Pulseless electrical activity.
3. Nitrogen washout technique.
4. Factors affecting accuracy of pulse oximeters.
5. Maximal voluntary ventilation.
6. Causes of high pressure of End Tidal Carbondioxide in capnogram.
7. What are the values not measured during spirometry? What are the indirect techniques to measure them?
8. Chest X-ray findings of Pneumonia.

III. Short answers on:

(10 x 3 = 30)

1. Diffusing capacity of the lung for carbonmonoxide (DLCO)-Indications and Interpretations.
2. Write the ABG findings showing Type I respiratory failure.
3. Radiographic signs of volume loss (atelectasis).
4. Sinus tachycardia.
5. ABG finding of fully Compensated Respiratory alkalosis.
6. Apnea-hypopnea index.
7. Draw Flow-volume loop of fixed upper airway obstruction.
8. Safety of Magnetic Resonance Imaging (MRI).
9. List any three tissue densities seen on a chest X-ray.
10. Lambert-Beer law.

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

[AHS 0423]

APRIL 2023

Sub. Code: 2613

B.Sc. RESPIRATORY THERAPY
SECOND YEAR (Regulations 2014-2015, 2018-2019 onwards)
PAPER III – DIAGNOSTIC TECHNIQUES IN CARDIO
RESPIRATORY DISEASES
Q.P. Code: 802613

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Role of Arterial Blood Gases in patients admitted with Breathlessness in High Dependency Unit.
2. Pulse Oximetry.
3. Diffusion Capacity.

II. Write notes on:

(8 x 5 = 40)

1. Role of Treadmill Test in a patient presenting with off and on Chest pain on climbing stairs.
2. Capnography.
3. Role of Chest X-ray in diagnosis of Tuberculosis.
4. Enumerate and draw various kinds of Flow Volume Loops in Spirometry.
5. Role of Respiratory Drive in assessment of patient presenting with Breathlessness.
6. FeNO.
7. ECG Monitoring in ICU/HDU.
8. Role of Echocardiography in Patient presenting with Breathing Difficulty.

III. Short answers on:

(10 x 3 = 30)

1. Auto PEEP.
2. Chest X-Ray Signs in Lobar Collapse.
3. Indications of MRI Chest.
4. Two examples of Diagnostic utility of Chest Ultrasound in ICU.
5. ABG findings in Obesity Hypoventilation Syndrome.
6. ECG findings in a patient with Myocardial infarction.
7. Echocardiography findings in a patient presenting with Acute Pulmonary Embolism and Low Blood Pressure.
8. Causes of Respiratory Acidosis.
9. Uses of PEFV in monitoring of Asthma.
10. Slow Vital Capacity.

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

[AHS 1123]

NOVEMBER 2023

Sub. Code: 2613

B.Sc. RESPIRATORY THERAPY
SECOND YEAR (Regulations 2014-2015, 2018-2019 onwards)
PAPER III – DIAGNOSTIC TECHNIQUES IN CARDIO
RESPIRATORY DISEASES
Q.P. Code: 802613

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Describe how to perform Capnometry and Interpret Capnograms.
2. Write a note on technique and quality of Chest X-ray and List the steps used to interpret chest X-ray.
3. Body Plethysmography – Technique and Significance.

II. Write notes on:

(8 x 5 = 40)

1. Evaluate the position of Endotracheal tube and Tracheostomy tube in Chest X-ray.
2. Role of Chest X-ray in diagnosis of Tuberculosis.
3. Enumerate and draw various kinds of Flow Volume loops in Spirometry.
4. Steps in Interpreting Arterial Blood Gas Report.
5. Reversibility of Airway Obstruction in Spirometry.
6. Channels used in Polysomnography.
7. Pressure-volume curve.
8. Ultrasound chest signs of Pleural effusion.

III. Short answers on:

(10 x 3 = 30)

1. Values Affecting Pulse Oximetry.
2. Write the ABG findings showing Type II respiratory failure.
3. Indications of MRI chest.
4. Two examples of diagnostic utility of Chest Ultrasound in ICU.
5. Contraindications of Spirometry.
6. How to estimate the heart rate in ECG?
7. FEF 25% - 75%
8. Base Excess in ABG.
9. High Resolution CT (HRCT).
10. Venous blood.

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

[AHS 0424]

APRIL 2024

Sub. Code: 2613

B.Sc. RESPIRATORY THERAPY
SECOND YEAR (Regulations 2014-2015, 2018-2019 onwards)

PAPER III – DIAGNOSTIC TECHNIQUES
IN CARDIO RESPIRATORY DISEASES

Q.P. Code: 802613

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Describe the principle of Echocardiogram. List the various parameters that can be assessed using Echocardiogram. Mention a few Cardiac and a few Respiratory conditions that can be diagnosed using Echocardiogram.
2. Enlist the various parameters that can be assessed using Arterial Blood Gases. Describe the process of sampling the blood for analysis. List the advantages of the various sites where blood can be sampled.
3. Briefly describe the principle of MRI and its uses in diagnosis of Cardiac Respiratory disease.

II. Write Notes on:

(8 x 5 = 40)

1. What parameters are not assessed in a limited channel sleep study?
2. What is AHI index?
3. Write briefly about three maneuvers of spirometry.
4. Describe “QRS” complex and various conditions where it can be abnormal.
5. Describe Nitrogen washout test.
6. What are all the structures that can be visualized in a chest X-Ray?
7. Compare and contrast continuous mandatory ventilation with intermittent mandatory ventilation.
8. Role of treadmill test in diagnosing Cardiac ailments.

III. Short answers on:

(10 x 3 = 30)

1. Define Inspiratory reserve volume.
2. Draw flow volume loops depicting normal and restrictive lung disease.
3. In which conditions is the DLCO increased.
4. Which parameters in spirometry indicates small airway dysfunction?
5. Describe Reproducibility in spirometry.
6. Diagrammatically represent the flow and pressure scalers in a patient on volume control ventilation.
7. Contraindications for treadmill testing.
8. Complications of Methacholine challenge test.
9. Enlist the parameters which can affect pulseoximetry readings.
10. Describe the ‘P’ wave in ECG.

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

[AHS 1125]

NOVEMBER 2025

Sub. Code: 2613

B.Sc. RESPIRATORY THERAPY
SECOND YEAR (Regulations 2014-2015 & 2018-2019 onwards)

PAPER III – DIAGNOSTIC TECHNIQUES
IN CARDIO RESPIRATORY DISEASES

Q.P. Code: 802613

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Polysomnography.
2. Methacholine challenge test.
3. Limited Channel Sleep study.

II. Write notes on:

(8 x 5 = 40)

1. Pulmonary function test.
2. Equipment needed for Arterial Blood gas Sampling.
3. Indications and Contraindications to Pulmonary Function Testing.
4. Write down the Anatomic Structures Seen on a Chest X-Ray.
5. Computed Tomography of the Chest
6. Bronchoprovocation test
7. Radiographic signs of Pulmonary Embolism.
8. Role of ultrasound in chest.

III. Short answers on:

(10 x 3 = 30)

1. Anion gap.
2. Chest X ray signs of pneumothorax.
3. Draw flow volume loops of spirometry in a patient with tracheal tumour.
4. Causes of metabolic acidosis.
5. Write an ABG findings showing type two respiratory failure.
6. Helium dilution technique.
7. What are the five common abnormalities diagnosed on seeing Electrocardiogram?
8. Define Forced Vital Capacity.
9. Parameters monitored in Treadmill Test
10. FEF 25% - 75%.
