[LL 0817] AUGUST 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)**

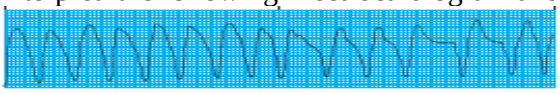
1. Electrocardiography – Features of a Normal waveform and Steps in Interpretation.
2. Body Plethysmography – Technique and Significance.
3. Anion gap – Definition, Causes, High Anion Gap Acidosis, Mixed Anion Gap Acidosis and Non Anion Gap acidosis.

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.

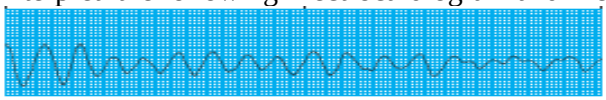
III. Short Answers on: **(10 x 3 = 30)**

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. pCO_2 – 28.1 mmHg, pO_2 – 57.8 mmHg, HCO_3 – 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, pCO_2 – 54.8 mmHg, pO_2 – 72.2 mmHg, HCO_3 – 23 mmol/l, BE 3.8, SpO_2 – 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, pCO_2 – 33.2 mmHg, pO_2 – 65 mmHg, HCO_3 – 21.1 mmol/l, SpO_2 – 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



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