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**MATRIC NUMBER: 18/MHS07/042**

**COURSE CODE: ANA 202**

**COURSE TITLE: GROSS ANATOMY OF THORAX, ABDOMEN, PELVIC AND PERINEUM**

**QUESTION: COVID-19 IS THE ONGOING VIRAL PANDEMIC IN THE WORLD AND THE REASON WHY YOU ARE AT HOME. DISCUSS THE ANATOMICAL IMPLICATION OF THIS VIRUS ON THE RESPIRATORY SYSTEM OF HUMAN.**

The covid-19 virus is a new virus linked to the same family of viruses as severe as severe Acute Respiratory syndrome (SARS) and some types of common cold. A novel coronavirus (CoV) is a new strain of corona virus. The covid-19 is a disease caused by the novel coronavirus first identified in Wuhan, China. COVID-19 has been described as a world pandemic by the World Health Organization.

The covid-19 virus is transmitted through direct contact with respiratory droplets of an infected person (generated through coughing and sneezing) and touching surfaces contaminated with the virus. Some symptoms of the virus can include fever, cough and shortness of breath. In more severe cases, infection can cause pneumonia or breathing difficulties.

Covid-19 virus manifests with chest CT imaging abnormalities, even in asymptomatic patients, with rapid evolution from focal unilateral to diffuse bilateral ground-glass opacities that progressed to or co-existed with consolidations within 1-3 weeks. ACE2 is the receptor for covid-19 virus. Ace2 proteins are present in abundance on lung alveolar epithelial cells and enterocytes of small intestine remarkably.

Covid-19 generally enters the body generally through the mouth or nose. From there the virus makes its way down the air sacs inside the lungs known as alveoli. Once in the alveoli, the virus uses its distinctive spikes proteins to hijack cells. The primary genetic programming of any virus is to make copies of itself and covid-19 is no exception. Once the virus RNA has entered a cell, new copies are made and the cell is killed in the process, releasing new viruses to infect neighboring cells in the alveolus. In the case of covid-19, the lungs exhibits edema, liquid proteinaceous secretions, fibrous connective tissue lesions with patchy inflammations and multinucleated giant cells. As the hijacking process unfolds, fluid begin to accumulate in the alveoli, causing a dry cough and making breathing difficult.