***Part A Essay title;***

***Pneumonia in the ventilated patient: descrice the pathophysiological changes, relate these to relvant signs and symptoms and justify an appropriate chest physiotherapy/ physical rehabilitation programme for an ITU patient.***

*Case study*

* *19 year old female, student. Smoker 10/day.*
* *Admitted 2 days ago to ITUwith fractured ribs on left; ribs 4-9. Injury was result of RTA (passenger), pt was extremely SOB and had sats at 81% at scene. In A&E fractures and L haemopneumothorax diagnosed, fractured L clavicle also apparent on CXR. Chest drain inserted; Type I respiratory failure concurrently worsened to the extent that pt was intubated and ventilated as oxygen levels could not be adequately maintained; pt transferred to ITU.*
* *Patient has been sedated and mechanically ventilated on SIMVfor 2 days; she has received 2 units of blood as Hb is was low (78). Patient has now developeda left sided ventilator acquired pneumonia (VAP). Thick secretions and wheezing are reported to you by nurses,supplemental oxygen requirements are now 40%. Pt has been nursed in supine mainly, andis rousable and can react/ respond to command as sedation is now being decreased. She is now breathing spontraneously with the ventilator assisting each breath and is maintaining normal CO2 levels.Pt able to move limbs to command. Minor desaturation observed during interventions and SOBOE. Pt anxious and frustrated at not being able to verbally communicate.*
* *PMH Nil, known smoker of 10 per day.*
* *CXR- L sided reduction in lung volume and opacities within lung field*

*Think about;*

* *Pneumonia- pathophysiology of VAP*
* *Consider detrimental effects of mechanical ventilation*
* *Relate signs and symptoms to pathological processes*
* *Consider suitable chest physio strategies, EBP/ effective physiological treatment strategy- explain*
* *Consider other concurrent strategies that may improve effectiveness of chest physio*
* *Consider exercise and rehab goals/ needs from now to hospital DC*
* *Consider patients physical goals/ needs*
* *Consider the limitations of the circumstances*
* *Consider safety in application of ALL treatments*
* *Consider modifications to ALL treatment- how? What? Why?*
* *Ethical/ legal considerations*
* *Consider psychosocial issues*
* *Emotional issues?ITU environment*
* *LO1,3,4*

***Part BPractical***

* *Case study based- case studies covering a range of pathology, issues and treatment strategies*
* *LO1, 2, 3, 4. Pathophysiology, analysis of S&S, problem recognition/ solving, appropriate treatment planning, physiological and evidence based justification of treatment.*
* *Practical exam; 10min read of case study selected by examiner, 30min questions to demonstrate clinical reasoning, application of therapy and practical skills.*