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| Qualification: Edexcel BTEC Level 3 Subsidiary Diploma in Sport  Unit 1: Principles of Anatomy and Physiology in Sport  Assessor: | |
| Assignment number 3 of 3 Cardio-respiratory and energy systems |

Date given out : Date assignment is to be handed in:

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| Scenario:  As part of your job at **David Lloyd** they would like you to create a presentation to show to new members at their induction meeting telling them about their  **Cardio-Respiratory** and **Energy systems** and **how they are used** in various sports or exercise. |

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| Task | What I have to do | Grading Criteria |
| 1 | Create a written presentation highlighting the below information.  Using detailed diagrams, describe the structure and function of the cardiovascular system.  Structure: Ensure all parts are accurately labelled. (Heart: atria, ventricles, bicuspid valve, tricuspid valve, aortic valve, pulmonary valve, aorta, vena cava-superior and inferior, pulmonary vein, pulmonary artery. Blood vessels: arteries, arterioles, capillaries, veins, venuoles.)  Function: eg delivery of oxygen and nutrients / function of each component within the heart eg Ventricles/ removal of waste products / thermoregulation / blood function  \*Remember you must be able to hand label & describe the function of the constituent parts of the cardiovascular system and relate them to exercise where appropriate. | **P5**:  Describe  the structure and function of the **cardiovascular** system. |
| 2 | Within the same written presentation describe the structure and function of the respiratory system, including gaseous exchange and the mechanisms of breathing.  Structure: Ensure all parts are hand labelled correctly. (Nasal cavity, epiglottis, pharynx, larynx, trachea, bronchus, bronchioles. Lungs: lobes, pleural, membrane, thoracic cavity, visceral pleura, pleural fluid, alveoli) Diaphragm, intercostals muscles (internal and external.)  Function, e.g. gaseous exchange / inspiration / expiration /lung volume measures/control of breathing (neural & chemical)  \*Remember you must be able to label and describe the function of the constituent parts of the respiratory system and relate them to the exercise where appropriate. | **P6:** Describe the structure and function of the **respiratory** system.  **PTO** |
| 3 | Within the same presentation describe the different energy systems and link each one to its use in sport and exercise activities.  e.g. Phosphocreatine energy system  Lactic acid system  Aerobic system | **P7:** Describe the **three different energy systems** and their use in sport |
| 4 | Using your detailed diagram explain the function of the cardiovascular system to one of your new clients. | (further to P5)  **M2:** Explain the function of the cardiovascular system |
| 5 | Examine in your presentation, the structure and functions of the respiratory system, paying particular attention to how each part is designed to meet its function. | (further to P6)  **M3:** Explain the function of the respiratory system |
| 6 | Your new client is a keen runner.  Consider the activity of running and examine the different energy systems and explain how they come in to play at different intensities and durations. Also think about the implications of training for your client. | (further to P7)  **M4:** Explain the three different energy systems and their use in sport and exercise activities. |
| 7 | Using a wider variety of sport and exercise activities, analyse the different energy systems and explain their use in the sports you have chosen to examine.  \*Think carefully about the sports you pick. | (further to M4)  **D2:** Analyse the three different energy systems and their use in sport and exercise activities |