

GCSE PE Y10 – CARDIOVASCULAR (CV SYSTEM)

A BLOOD VESSELS

1	Arteries	<ul style="list-style-type: none"> • Transports mostly oxygenated blood (except pulmonary artery) away from the heart • Thick elastic walls
2	Veins	<ul style="list-style-type: none"> • Returns mostly deoxygenated blood (except pulmonary vein) back to the heart • Thin walls with large lumen • Contain Valves
3	Capillaries	<ul style="list-style-type: none"> • Site for gas exchange • Very thin walls (1 cell thick) • Located in the tissue (surround muscle fibres and alveoli in lungs)

B FUNCTIONS OF THE CV SYSTEM

1	Transports Oxygen, Carbon Dioxide & Nutrients
2	Clotting of Open wounds
3	Regulation of Body Temperature

C PATHWAY OF BLOOD

1	Right Atrium (RA)	Deoxygenated blood cell starts in the RA
2	Right Ventricle (RV)	Deoxygenated blood passes through the tricuspid valve into the RV
3	Pulmonary Artery (PA)	Deoxygenated blood passes through semi lunar valve out into the PA
4	Lungs	Blood becomes oxygenated via gas exchange at the lungs
5	Pulmonary Vein (RV)	Oxygenated blood returns to the heart via the Pulmonary Vein
6	Left Ventricle (LV)	Oxygenated blood passes through the Bicuspid valve into the LV
7	Aorta	Oxygenated blood passes through aortic semi lunar valve into the aorta
8	Body & Tissues	Blood becomes deoxygenated via gas exchange at muscles and tissues
9	Vena Cava	Deoxygenated Blood returns to Right atrium via the vena cava

D KEY TERMS

1	Vascular Shunt	The redistribution of blood during exercise. Blood is redirected to the muscles from other areas of the body during exercise via vasodilation & vasoconstriction
2	Vasoconstriction	Narrowing of blood vessels to reduce blood flow
3	Vasodilation	Widening of blood vessels to increase blood flow
4	Heart Rate	Beats per minute
5	Stroke Volume	Volume of blood ejected from the heart per beat
6	Cardiac Output	Volume of blood ejected from the heart per minute Cardiac output (CO)= Heart Rate (HR) x Stroke Volume (SV)
7	Red blood cells	Carry O ₂ from the lungs to the working muscles & removes CO ₂ . Haemoglobin binds the O ₂ to the blood cells.
8	White blood cells	Part of the immune system to help fight infection

E STRUCTURE

