Year 11	Autumn Term
Subject GCSE PE	Topic Paper 1: Respiratory, Cardiovascular Paper 2: Health, Fitness and Wellbeing

	Knowledge	Answer
	Paper 1 – Respiratory System	
1	What is the pathway of air?	Mouth → Nose → Trachea → Bronchi → Bronchiole → Alveoli
2	What is the role of respiratory muscles during Inspiration?	Intercostal muscles and diaphragm contract. Ribs move upwards and out. Diaphragm moves downwards meaning the area of the thoracic cavity increases. Pressure in the lungs decreases drawing air in.
3	What is the role of respiratory muscles during Expiration?	Intercostal muscles and diaphragm relax. The ribs lower and the diaphragm moves upwards meaning the pressure in the lungs increases forcing air out.
4	What is the definition for Breathing rate?	The frequency of breathing measured in breaths per minute.
5	What is the definition for Tidal Volume?	The amount of air which enters the lungs during normal inhalation at rest.
6	What is the definition for Minute Ventilation?	The volume of gas inhaled or exhaled from the lungs per minute
7	Describe Aerobic exercise	Use of oxygen for the duration of exercise glucose + oxygen → energy + carbon dioxide + water.
8	Describe Anaerobic exercise	Exercise which does not allow for the use of oxygen glucose → energy + lactic acid.
9	What is Gaseous Exchange?	The movement of gases taking place at the alveoli and capillaries. Gases diffuse through the walls of the capillaries surrounding the alveoli.

10	**Paper 1 – Cardiovascular System**	
11	Describe what the systemic circulatory loop is on the double circulatory system	The circulatory loop that controls blood flow from the heart to the rest of the working muscles and organs.
12	Describe what the pulmonary circulatory loop is on the double circulatory system	The circulatory loop that controls blood flow from the heart to the lungs.
13	Describe the characteristics of the arteries	Carry blood at high pressure from the heart to the body tissues. Thick cell walls. Small lumen, No valves. Carries oxygenated blood.
14	Describe the characteristics of the veins	Carry blood at low pressure and return the blood to the heart. Thin cell walls. Large lumen. Has valves to prevent backflow. Carries deoxygenated blood.
15	What is the role of the Aorta?	Takes oxygenated blood from the left ventricle to the rest of the body.
16	What is the role of the Pulmonary Artery?	Takes deoygentated blood from the right ventricle to the lungs
17	What is the role of the Vena Cava?	Brings deoxygentated blood from the body to the right atrium.
18	What is the role of the Pulmonary Vein?	Brings oxygenated blood from the lungs to the left atrium
19	What is the definition of Heart Rate?	The number of times the heart beats per minute
20	What is the definition of Stroke Volume?	The amount of blood pumped out of the heart (left ventricle – to the body) during each contraction
21	What is the definition of Cardiac Output?	The volume of blood pumped per minute by each ventricle. Cardiac output = SV x HR
	Paper 2 – Health, Fitness and Wellbeing	
22	What is the definition of Health?	The state of emotional, physical and social well-being
23	What is the definition of Fitness?	The ability to meet the demands of your environment.

24	What is the definition of Well-being	This refers to a feeling or mental state of being contented, happy, prosperous and healthy
25	What are the Physical consequences of a sedentary lifestyle?	Increased risk of injury, Increased risk of coronary heart disease, higher blood pressure, increased risk of obesity, increased risk of type 2 diabetes, poor fitness, poor posture
26	What are the Emotional consequences of a sedentary lifestyle?	Lack of self esteem / confidence, Stress management, Poor self image
27	What are the Social consequences of a sedentary lifestyle?	Friendship and lower levels of confidence, lack of belonging to a group, Loneliness
28	What is the definition of a balanced diet?	A diet that contains the correct proportions of carbohydrates, fats, proteins, vitamins, minerals and water necessary to maintain good health.
29	What is the role of Carbohydrates?	Primarily involved in energy production. Simple and complex
30	What is the role of Proteins?	Building blocks for body tissue and are essential for repair.
31	What is the role of Fats?	Important role in insulating the body. Saturated fats Unsaturated fats
32	What is the role of minerals?	Essential for health and chemical reactions in the body. Macro minerals Trace elements
33	What is the role of Vitamins?	Vital for the functioning of our metabolism and the prevention of disease.
34	What is the role of Fibre?	This helps the digestive system work effectively. It also reduces cholesterol.
35	What is the role of Water?	Essential for good health. Carries nutrients in the body and helps with the removal of waste products. Helps to regulate body temperature.