50 THINGS

ST CLEMENT'S HIGH SCHOOL

‘50 THINGS’

Dear Parent/Carer,

Please find enclosed the **top ‘50 things’** our staff believe to be the **key to success** in their subject in the forthcoming GCSE Exams. Whilst these aren’t the only things that the students need to learn they are a handy, quick and simple way to support your son/daughter during this vital preparation period.

In all GCSE Examination Papers a good amount of marks, in some cases 25% of the overall grade are awarded for pure recall of facts, the quicker and more readily students can remember these facts the more time they allow themselves for tackling the more difficult questions involving higher order thinking skills.

Retrieval practice session:

1. Pick 5 questions
2. Repeat each question 5 times individually first
3. Complete the 5 questions in order three times
4. Now test the 5 questions in a random order
5. Session should be no longer than 15 minutes

Over time:

- Revisit previously tested questions
- Randomly test on questions that the student has mastered

Yours Sincerely

The Staff at St Clement’s High

Contents

Biology Paper 1

	Questions	Answers
	Cell Biology	
1	What type of cells are plant and animal cells?	Eukaryotic
2	What type of cells are bacterial cells?	Prokaryotic
3	Name five sub cellular structures found in animal cells.	Nucleus, cytoplasm, cell membrane, mitochondria, ribosomes
4	Plant cells have all the sub-cellular structures that animal cells have, but they often have two additional structures as well. Name them.	Chloroplasts and vacuole (also cell wall)
5	What is the name of microscopes that have a higher magnification and resolving power than light microscopes?	Electron microscopes
6	What is the calculation for magnification?	$= \frac{\text{size of image}}{\text{size of real object}}$
7	Why is cell division by mitosis important?	Growth and repair in eukaryotes
8	What is the name given to an undifferentiated cell of an organism which is capable of giving rise to many more cells of the same type?	Stem cell
9	State three places stem cells are found.	Embryos, adult bone marrow & meristem tissue in plants
10	Describe the spreading out of particles of any substance in solution or a gas by diffusion.	There is a net movement of particles from an area of high concentration to an area of low concentration.
11	Name three substances that either diffuse into or out of the blood.	Oxygen, carbon dioxide and urea
12	Describe the movement of water in osmosis.	Osmosis is the diffusion of water from a dilute solution to a concentrated solution through a partially permeable membrane
13	What is the name given to the movement of a substance from a more dilute solution to a more concentrated solution which requires energy from respiration?	Active transport
	Organisation	
14	What name is given to a group of cells with a similar structure and function?	Tissue
15	What name is given to an aggregation of tissues performing specific functions?	Organ
16	What feature of enzymes enables them to catalyse specific reactions in living organisms?	The shape of their active site
17	Where is amylase produced and what does it do?	In saliva and the pancreas to break down starch
18	Where are proteases produced and what do they do?	In the stomach and pancreas to break down proteins into amino acids
19	Where are lipases produced and what do they do?	In the pancreas to break down lipids to glycerol and fatty acids
20	What is made in the liver and stored in the gall bladder?	Bile
21	Where does the right ventricle pump blood to?	The lungs

22	Where does the left ventricle pump blood to?	The whole body
23	Where are the aorta, vena cava, pulmonary artery, pulmonary vein and coronary arteries found?	Connected to the heart
24	Name the three types of blood vessel.	Arteries, veins and capillaries
25	What is the blood made up of?	Plasma, RBCs, WBCs and platelets
26	What is the state of physical and mental well-being?	Health
27	State four causes of ill health.	Diseases, diet, stress and life situations
28	State a proven risk factor for type 2 diabetes.	Obesity
29	State three risk factors for cardiovascular disease.	Diet, smoking and exercise
30	What is the result of changes in cells that lead to uncontrolled growth and division?	Cancer
31	State four factors that affect the rate of transpiration.	Temperature, humidity, air movement and light intensity
32	Which cells are adapted for efficient uptake of water by osmosis, and mineral ions by active transport?	Root hair cells
33	What does xylem tissue transport?	Water
34	What do stomata and guard cells control in leaves?	Gas exchange and water loss
35	What does phloem tissue transport?	Dissolved sugars (food)
36	What is the movement of food molecules through phloem tissue called?	Translocation
	Disease	
37	What is a pathogen?	A microorganism that causes infectious disease
38	Which serious disease is spread by inhalation of droplets from sneezes and coughs and causes a fever and a red skin rash?	Measles
39	Which virus attacks the body's immune system meaning the body can no longer deal with other infections or cancers?	HIV
40	Which plant pathogen affects many species resulting in a lack of growth?	Tobacco mosaic virus (TMV)
41	What type of food poisoning is spread by bacteria ingested in food or on food prepared in unhygienic conditions?	Salmonella
42	Which STD causes a thick yellow/green discharge from the vagina or penis and pain in urinating?	Gonorrhoea
43	Which fungal disease causes purple or yellow spots to develop on leaves, affecting the rate of photosynthesis and growth?	Rose black spot
44	What type of pathogen is malaria caused by?	Protist
45	State three ways white blood cells help to defend against pathogens.	Phagocytosis, antibody production, antitoxin production

46	What is the name given to introducing small quantities of dead or inactive forms of a pathogen into the body to prevent infection?	Vaccination
47	Which type of pathogen do antibiotics kill?	Bacteria
48	What are drugs tested on during clinical trials?	Healthy volunteers and patients
	Bioenergetics	
49	What is the word equation for photosynthesis?	Carbon dioxide +water à glucose + oxygen
50	Name an endothermic reaction in which energy is transferred from the environment to chloroplasts by light.	Photosynthesis
51	State four factors that affect the rate of photosynthesis.	Temperature, light intensity, carbon dioxide concentration and the amount of chlorophyll
52	How do plants produce proteins?	Using glucose and nitrate ions in the soil
53	What is the name for an exothermic reaction that is continuously occurring in living cells?	Respiration
54	Write the equation that represents aerobic respiration.	Glucose + oxygen à carbon dioxide + water
55	What is the chemical formula for glucose?	$C_6H_{12}O_6$
56	What is the equation for anaerobic respiration in muscles?	Glucose à lactic acid
57	What is the equation for anaerobic respiration in plant and yeast cells?	Glucose à ethanol + carbon dioxide
58	Anaerobic respiration in yeast is called fermentation. What is it used to manufacture?	Bread and alcoholic drinks
59	What increases during exercise to supply muscles with more oxygenated blood?	Heart rate, breathing rate & breath volume

Biology Paper 2

	Questions	Answers
	Homeostasis	
1	Name three conditions in the human body that are controlled by homeostasis?	Blood glucose concentration, body temperature, water levels
2	What path does a nerve impulse take in a reflex arc?	Stimulus à Receptor à Sensory neurone à Relay neurone à Motor neurone à Effector à Response
3	What is a gap between two neurones called?	A synapse
4	How do reflexes differ from a normal response?	Automatic, fast and do not involve the brain
5	Name 5 glands in the endocrine system	Pituitary gland, pancreas, adrenal gland, ovary, testes
6	How are hormones carried around the body?	In the blood
7	Which gland controls blood glucose levels?	Pancreas
8	What hormone which controls glucose levels is produced in the pancreas?	Insulin
9	In the liver, what is excess glucose converted into?	Glycogen
10	What does follicle stimulating hormone (FSH) do?	Causes the maturation of an egg in the ovary
11	What does luteinising hormone (LH) do?	Stimulates the release of an egg (ovulation)
12	What do oestrogen and progesterone do?	Maintain the lining of the uterus
13	Name 4 hormonal methods of contraception.	Oral contraceptives, contraceptive injection, contraceptive patch, contraceptive implant
	Inheritance, Variation, Evolution	
14	How could the cells produced by mitosis be described?	Identical
15	How could the cells produced by meiosis be described?	Non-identical
16	Name the male and female gametes in animals	Sperm and egg cells
17	Name the male and female gametes in flowering plants	Pollen and egg cells
18	Which type of reproduction leads to variety in the offspring, sexual or asexual?	Sexual
19	What are the offspring produced by asexual reproduction called?	Clones
20	State the three stages in meiosis.	Copies of the genetic information are made. The cell divides into two identical cells. These cells then immediately divide again to form four cells with half the normal number of chromosomes.
21	What is a small section of DNA on a chromosome called?	A gene
22	What are the different forms of a gene called?	Alleles
23	What is meant by a dominant gene?	It is always expressed, even if there is only one copy
24	How many chromosomes are in normal human body cells?	46 (23 pairs)

25	How many chromosomes are in sperm and egg cells?	23
26	What are the sex chromosomes in human males and females?	Males – XY Females – XX
27	Name two inherited conditions.	Cystic fibrosis and polydactyly
28	Name two factors that can affect variation in plants and animals.	Genes and the environment
29	Give a definition for evolution.	A change in the inherited characteristics of a population over time through a process of natural selection.
30	What is selective breeding?	When humans breed plants and animals for particular genetic characteristics.
31	What is genetic engineering?	When the genome of an organism is modified by adding a gene from another organism to give desired characteristics.
32	Over how long do fossils form?	Millions of years
33	What is extinction?	When there are no living members of a species left.
34	What are MRSA bacteria resistant to?	Antibiotics
35	Give the hierarchy of classification of living organisms.	Kingdom à Phylum à Class à Order à Family à Genus à Species
36	What are the three domains?	Achaea, Bacteria and Eukaryota
	Ecology	
37	What is an ecosystem?	The interaction of a community of living organisms with the non-living parts of their environment.
38	What do plants compete for?	Light, space, water and mineral ions
39	What do animals compete for?	Food, mates and territory
40	Name seven abiotic factors.	Light intensity, temperature, moisture levels, soil pH and mineral content, wind intensity and direction, carbon dioxide levels (plants), oxygen levels (aquatic animals)
41	Name four biotic factors	Availability of food, new predators arriving, new pathogens, not enough of a species to breed.
42	What do all food chains start with?	A producer (plant).
43	Why is the carbon cycle important?	It returns carbon from organisms to the atmosphere as carbon dioxide which is then used by plants in photosynthesis.
44	Why is the water cycle important?	It provides fresh water for plants and animals on land before draining into the sea.
45	What is biodiversity?	The variety of all the different species of organisms in an ecosystem.
46	Name 3 places that pollution can occur.	Water, air, land
47	How do humans reduce the amount of land available for other animals and plants?	Building, quarrying, farming and dumping waste
48	Why do humans carry out deforestation?	To provide land for cattle and rice fields, to grow crops for biofuels
49	What are three effects of global warming?	Mountain areas becoming warmer, seas are becoming more acidic, seas are becoming warmer.
50	Give three ways humans can increase biodiversity.	Breeding programmes for endangered species, protection of habitats, and reduction of deforestation.

Business

	Question	Answer
	Unit 1- Business	
1	What is Backwards vertical growth?	When a business merges with, or takes over a business that supplies it with goods or services.
2	Explain the word Dividend?	The money paid to shareholders from the profits of a limited company.
3	What is an Entrepreneur?	Is a person who takes the risk of starting and running a business enterprise
4	What is External growth?	is growth of a business by takeover or merger
5	Give examples of an External stakeholders.	are the local community, suppliers, customers and government
6	What is Forwards vertical growth?	When a business merges with or takes over a business that it supplies goods or services to.
7	What is Horizontal growth?	Is a merger or takeover where two business are involved in a similar operation, e.g. two electrical producers or two shops selling fashion clothing.
8	Give examples of internal stakeholders.	Are the business owners and the people who work in the business.
9	What is Limited Liability?	where the responsibility for the debts of a business is limited to the amount invested by the shareholder
10	What is Organic growth?	growth achieved through the expansion of current business activities such as increasing sales
11	What are Shareholders?	are the owners of a private or public limited company
12	What is a Takeover?	Where a business takes a controlling interest in another business.
13	What is Unlimited Liability?	where the responsibility for all the debts of a business rests with the owners of the business
	Unit 2- Marketing	
14	Explain the term competitor pricing	When a price is set based on prices charged by competitor business for a similar product
15	Explain the term digital distribution	Delivering content through the Internet to a computer or other device
16	What is the marketing mix, otherwise known as the 4PsMarketing mix?	Are price, product, place, promotion. Get one wrong and the product may not sell.
17	Explain the term penetration pricing	Setting a low initial price on a new product to appeal immediately to the mass market
18	Name the 4 stages of the Product life cycle	introduction, growth, maturity, decline
19	What is Qualitative data?	Data based on opinions of those being asked
20	What is Quantitative data?	Data collected that is based on facts or numbers.
21	What is Secondary research?	Secondary research is the collection of data using information collected by others
22	Explain the term price skimming.	The price is set high as some customers are willing to pay higher prices
23	Explain the term target market	The group of customers to whom a business aims to sell its products

24	**Unit 3- People**	
25	What are Fringe benefits?	Additional benefits that workers receive on top of their pay. They include pensions, child care vouchers and gym membership
26	What does the business term "Functions" mean?	Are different types of work that need to be done in business including, Human Resource production, finance and marketing
27	What does the Human resource function do?	Recruits (adverts, interviews and selects) and trains (induction, on the job) employees
28	What is induction training?	Training to introduce a new worker to the business
29	What is on a job description?	States the main duties or tasks or responsibilities of the workers
30	What is an organisation chart?	A diagram that shows how the workers are organised in a business and who is in charge of whom
31	What is on a person specification?	Lists the qualities, qualifications and knowledge that a person should have to do a particular job.
32	What is span of control?	Are the number of subordinates who report directly to the line manager
33	What does The Equality Act 2010 protect worker from?	Protects workers from different types of discrimination including gender, race, disability, sexual orientation, religion or belief and unequal pay for men and women
34	What is a Trade union?	An employee organisation that exists to represent the interests of its members
35	What is the Working time directive?	Statement of the maximum number of hours that a person can be asked to work.
36	What is a Zero-hours contracts	Are contracts given to employees which do not guarantee any work
	Unit 4- Operations	
37	What is Batch production?	The process of production where one type of product is made and then production is switched to make different products
38	What is Flow production?	The production of one product that takes place continuously using a production or assembly line. This is sometimes called mass production
39	What is Job production?	The process of production where products are made individually
40	What is Quality Control?	A system for inspecting the quality of the goods or services produced and that they are of a good standard
41	What is Quality Assurance?	An approach that involves the whole business focusing on quality, thus aiming to prevent quality problem arising
42	What is Ecommerce?	The bringing together of buying and selling electronically
	Unit 5- Finance	
43	What is Interest?	The amount of money that has to be paid on borrowed money
44	What is an Overdraft?	An arrangement with a bank that a business can spend more money than it has in its account

45	What is Trade Credit?	When the business has the goods to sell and agrees to pay at some time later
46	What is Revenue?	Is income coming into the business from the sale of products or services
47	What is Gross Profit?	Is revenue minus the cost of sales
48	What is Net Profit?	Is gross profit minus the costs of running the business
	Unit 6- Influence on Business	
49	What are ethics?	Is doing what is morally right. Paying a fair wage, not employing children, not using suppliers that may use unethical practices (slave labour, sweat shops)
50	What is Fairtrade?	Is a movement that encourages businesses to pay a fair price to supplier in developing countries and consumers to buy Fairtrade goods.
51	What is sustainable production?	Is when production does not lead to the depletion (using up) of natural resources. (Use pine and not oak!)

Catering

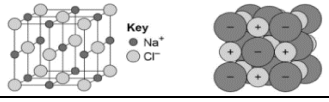
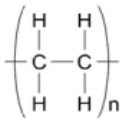
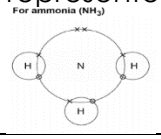
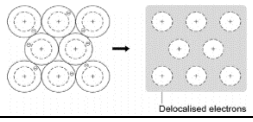
	Question	Answer
1	Name 5 residential establishments.	Hotel, B&B, guest house, hostel, motel, campsite, caravan park, theme park.
2	Name 2 online review sites.	Trip advisor, Facebook, Instagram.
3	Give 3 features of a 3* hotel.	Free Wi-Fi, car parking, safe, clean, off site restaurant, lift, lots of room options, conference facilities
4	What is the pastry chef responsible for?	Making the cakes and pastries
5	Give 5 methods of portion control.	Scoop, ladle, counting the item, weighing the item, distribution of toppings, cutting guides
6	Describe a temporary contract.	The person only works when the business needs them due to illness, holiday cover, and busy periods.
7	What sort of footwear should a chef wear?	Non slip, steel toe cap, covered toes, safety shoes
8	What is vending service?	A machine which it stocked and replenished. Fully automated. Can serve chilled or ambient food.
9	Name 5 non-commercial establishments.	Prison, hospital, armed services, care home, schools, soup kitchen.
10	Give 3 advantages of local suppliers.	More money for the local economy, less transportation costs, fresher, sustainably produced, and reduced food miles.
11	Give 5 features of fast food restaurants.	Limited menu, food eaten with fingers, menu is on the wall, often set meal for a set price, unhealthy.
12	What are the advantages of online review sites?	Everyone can contribute, up to date, easily accessible. Often has pictures.
13	Give 5 personal attributes of front of house staff.	Organized, polite, clear speaking, clean, hygienic, knowledgeable, presentable,
14	Give 3 things that full time employees are entitled to.	Holiday pay, sick pay, maternity pay, pension
15	Describe the role of waiting staff.	To greet the customers, to take their food / drink order, to answer any queries, to bring the food, to laisse between customer and chefs.
16	What are the responsibilities of the head chef?	To plan the menu, order the food, staff training, health and safety, staff rota, hiring and firing.
17	How does good customer service contribute to the success of a business?	Satisfied customers will return.
18	What are the responsibilities of the head waiter?	To deal with complaints, staff rota, staff training, to laisse with the head chef.
19	Describe part time contracts.	This is a contract that is less than 30 hours a week. There are set hours and responsibilities of the job.

20	What is workflow?	The flow of work / food in the kitchen
21	How do costs contribute to the success of an establishment?	If a business has too many costs it will not make a profit and will not be a success.
22	How should waiting staff deal with a complaint?	Listen, Apologise, Sort it out, and Thank them for bringing the problem to your attention.
23	What are the benefits of portion control?	Less waste, less complaints. The customers get a consistent satisfying portion.
24	List 3 jobs in a restaurant.	Waiter, bar staff, sommelier, head waiter, head….
25	What are the different coloured chopping boards for each food?	Red = raw meat, yellow = cooked meat, blue = fish, green = fruit, brown= veg, white=dairy
26	List 3 safety points for using the hob.	Never leave a pan unattended, turn pan handles inwards, control the heat carefully. Know where the fire blanket is and how to use it
27	List 3 safety points of using the oven.	Always wear oven gloves, check the oven it set to a correct temperature, make sure the gas is lit
28	Give 3 ways of prevent slips.	Non slip floor, non-slip shoes, clean up spillages.
29	What does coeliac disease mean?	The person is unable to digest gluten.
30	What does gross profit mean?	This is the amount of money taken before any costs have been removed.
31	What happens to bacteria at 0-5oC?	They grow slowly.
32	2 ways of preventing slips.	Clean up spillages immediately, wet floor sign
33	What are the powers of an environmental health officer?	They can enter and inspect a food premises for food hygiene and safety standards.
34	What is the danger zone?	The range of temperatures that bacteria grow quickest
35	What does the night porter do?	Check people in, show them to their room, security, answer queries, and make guests a snack.
36	What temperatures are the danger zone?	5-63^{o}C
37	Explain what is meant by contract caterers?	A contract caterer is a catering company that is hired by a company or organisation to provide catering services every day or for a special occasion.
38	What is transported catering service?	The food is made in one place and eaten on a plane or train.
39	Name 5 job roles in the front of house.	Porter, receptionist, concierge, administration, finance, head…..
40	What does the term FIFO mean?	First in First Out (stock control)
41	List 4 activities in the running of a hotel that the general manager is responsible for.	Budgets, staff rota, hiring and firing, health and safety,
42	List three pieces of a chef's uniform.	Hat / hair covering, chef's whites, non-slip shoes, apron.

43	Give 3 reasons why a dress code is important to the success of a business?	First impressions count, practical, uniformity with other areas, staff are identifiable
44	List 4 ways the hospitality industry can help the environment?	To reduce the amount of single use plastics, reduce the amount of towels that are unnecessarily washed, signs to ask guests to turn off lights, electricity to the hotel rooms on a key card, heating / air con on a timer, reusing kitchen leftovers, re using plastic containers, installing solar panels, using dishwater to water plants
45	Why should an extractor fan be fitted in a kitchen?	To remove harmful fumes and dust.
46	What is meant by net profit?	the actual profit after working expenses have been removed
47	What does the porter do?	Take the guests bags to their room
48	List 4 jobs in the kitchen.	Head chef, sous chef, patissier, commis chef, kitchen porter.
49	Explain the term cross contamination.	The process by which bacteria or other microorganisms are unintentionally transferred from one substance or object to another, with harmful effect.
50	Name 4 pathogenic microorganisms.	Salmonella, bacillus Ceres, staphylococcus Aureus, clostridium Botulinum, e.Coli.

Chemistry Paper 1

	Questions	Answers
1	What is the name given to the smallest part of an element that can exist?	Atom
2	About how many elements are there in the periodic table?	100
3	What name is given to two or more elements chemically combined in fixed proportions?	Compound
4	What name is given to two or more elements or compounds not chemically combined?	Mixture
5	What are filtration, crystallisation, simple distillation, fractional distillation and chromatography all used for?	Separation of mixtures
6	What name is given to an incorrect model of an atom that suggested atoms are a ball of positive charge with negative electrons embedded in them?	Plum pudding model
7	Who adapted the nuclear model of the atom by suggesting that electrons orbit the nucleus at specific distances?	Niels Bohr
8	What was James Chadwick able to provide evidence for the existence of?	Neutrons in the nucleus
9	What are the relative charges for protons, neutrons and electrons?	P= +1, N= 0, E= -1
10	What does the atomic number indicate about the atoms of an element?	The number of protons
11	What is the approximate radius of an atom?	0.1nm ($1x10^{-10}$m)
12	What are the relative masses for protons, neutrons and electrons?	P= 1, N= 1, E= Very Small
13	What is the mass number of an element the sum of?	The protons and neutrons in an atom
14	What is the name of atoms of the same element that have different numbers of neutrons?	Isotopes
15	What are elements in the periodic table arranged in order of?	Atomic number
16	What do elements in the same group of the periodic table have in common?	The same number of electrons in the outer shell and similar properties
17	How did Mendeleev overcome problems with ordering the elements?	He left gaps for undiscovered elements
18	What react to form positive ions?	Metals
19	The elements of which group of the periodic table are unreactive and do not easily form molecules?	Group 0
20	Which group of the periodic table is known as the alkali metals?	Group 1

21	Does reactivity increase or decrease going down group 1?	Increase
22	Which group of the periodic table is known as the halogens?	Group 7
23	What are the three types of chemical bond?	Ionic metallic and covalent
24	Which chemical bond forms when non-metals combined with metals?	Ionic
25	What charge do ions of group 2 elements have?	2
26	What charge do ions of group 7 elements have?	-1
27	Which ionic structure can be represented in the following forms: 	Sodium Chloride
28	What is a covalent bond?	A shared pair of electrons between two atoms
29	What type of structure is represented here: 	Polymer
30	What does (aq) show in a chemical equation?	Aqueous solution
31	What state of matter are most polymers at room temperature?	Solid
32	What type of chemical bonding is represented in this diagram? 	Covalent
33	Which type of chemical bonding can be represented in the following form: 	Metallic
34	What determines the amount of energy needed to melt or boil a substance?	The strength of the forces/bonds between the particles
35	State key properties of ionic compounds.	They have high melting and boiling points and they conduct electricity when molten or dissolved in water
36	What forces acting between small molecules hold them together when liquid?	Weak intermolecular forces
37	Name three examples of giant covalent structures that you need to know.	Diamond, graphite and silica
38	How are atoms arranged in pure metals?	Layers
39	Which particles in metals allow them to conduct electricity and thermal energy?	Delocalised electrons

40	How many covalent bonds does each carbon atom in diamond have?	4
41	How many covalent bonds does each carbon atom in graphite have?	3
42	Which material is a single layer of graphite and has properties that make it useful in electronics and composites?	Graphene
43	What name is given to cylindrical fullerenes with very high length to diameter ratios?	Carbon nanotubes
44	Which law states that no atoms are lost or made during a chemical reaction?	(The law of) conservation of mass
45	Why do some reactions appear to involve a change in mass?	A reactant or product is a gas
46	What name is given to the reactant that is completely used up in a chemical reaction?	The limiting reactant
47	What do metals react with oxygen to form in oxidation reactions?	Metal oxides
48	Which chemical reaction can be used to extract metals less reactive than carbon from their oxides?	Reduction (using carbon)
49	What do acids react with metal to form?	A salt and hydrogen
50	What word is used to describe the following reaction: acid + alkali à salt + water?	Neutralisation
51	What produce hydrogen ions (H^+) in aqueous solutions?	Acids
52	What do aqueous solutions of alkalis contain?	Hydroxide ions (OH^-)
53	Write the ionic equation for a neutralisation reaction.	$H^+(aq) + OH^-(aq) \rightarrow H_2O(l)$
54	What process can be used to split ionic compounds that are either molten or in aqueous solution by passing a current through them?	Electrolysis
55	What process is used to extract metals that are more reactive than carbon?	Electrolysis
56	Why is cryolite mixed with aluminium oxide in extraction of aluminium?	To lower the melting point
57	What name is given to a reaction that transfers energy to the surroundings, increasing the temperature of the surroundings?	Exothermic
58	What name is given to a reaction that transfers energy from the surroundings, decreasing the temperature of the surroundings?	Endothermic
59	What name is given to the minimum amount of energy that particles must have to react in a chemical reaction?	Activation energy

Chemistry Paper 2

	Questions	Answers
	Chemistry Topic - Rates of Reaction	
1	How is the rate of a chemical reaction calculated?	Mean rate of reaction = quantity of product formed/Time Taken or quantity of reactant used/ time taken
2	What two units can be used for rate of reaction?	The units of rate of reaction may be given as g/s or cm3/s. (HT: Need to know quantity of reactants in terms of moles and units for rate of reaction in mol/s.)
3	What is the collision theory?	Chemical reactions can occur only when reacting particles collide with each other and with sufficient energy. The minimum amount of energy that particles must have to react is called the activation energy.
4	Name 5 factors that cause a reaction to speed up?	Temperature, Concentration, Surface Area, Catalyst, Pressure
5	How does increasing temperature increase the rate of a chemical reaction?	The particles gain more energy, move faster increasing the number of successful collisions.
6	How does increasing the concentration affect the frequency of collisions?	More particles in a set volume means the particles are more likely to collide with sufficient energy.
7	What is a catalyst?	Catalysts change the rate of chemical reactions but are not used up during the reaction. Different reactions need different catalysts. Enzymes act as catalysts in biological systems.
8	How does a Catalyst speed up a chemical reaction?	Provides an alternative pathway for a reaction by lowering the activation energy.
9	What does the symbol, $\rightleftharpoons$, mean in an equation?	Reversible Reaction
10	If the reverse reaction is exothermic (gives out heat) what condition would favour the forward reaction?	Endothermic reaction (takes in heat)
11	What is an equilibrium?	When a reversible reaction occurs in apparatus that prevents the escape of reactants and products equilibrium is reached when the forward and reverse reactions occur at exactly the same rate.
	Organic Chemistry	
12	How is crude oil separated into different fractions?	Fractional Distillation
13	Explain how fractional distillation works.	Crude oil is <u>heated</u>, it <u>evaporates</u> and rises up the column. When the fraction cools it <u>condenses</u> back to a liquid and is collected. Short chains evaporate first and condense higher up in the column.
14	What are the fractions of crude oil used for?	Fuels (Petrol & Diesel – Cars; Kerosine – Jet Fuel; Bitumen – Road surfaces etc.)
15	Most of the hydrocarbons found in crude oil are called alkanes. What is the general formula of an alkane?	C_nH_{2n+2}
16	Name the first 4 alkanes.	Methane (1C), Ethane (2C), Propane (3C), Butane (4C)

17	Describe three trends in the properties of the alkanes.	Boiling points – increase with increasing molecular size due to larger intermolecular forces. Viscosity (how runny it is) – increases with increasing molecular size. Flammability - decreases with increasing molecular size due to more bonds to break.
18	The fractions of crude oil (alkanes) are used as fuels. What happens in combustion?	The combustion of hydrocarbon fuels releases energy. During combustion, the carbon and hydrogen in the fuels are oxidised. The complete combustion of a hydrocarbon produces carbon dioxide and water.
19	Hydrocarbons can be broken down into smaller more useful hydrocarbons. What is this process called?	Cracking
20	Name the two products of cracking?	Alkanes & Alkenes
21	What are the alkenes used to produce?	They are the monomers used to make polymers (plastics).
	Analysis	
22	What does a pure substance mean, in scientific terms?	A pure substance is a single element or compound, not mixed with any other substance.
23	How can the melting and boiling point of a pure element or compound be used to determine if the chemical is pure?	Pure substances will have a specific boiling point. Mixtures will have a range of boiling points.
24	What is a formulation?	A formulation is a mixture that has been designed as a useful product with a specific purpose. All quantities are measured precisely.
25	What is chromatography?	Chromatography is a technique used to separate a mixture of inks.
26	Explain how chromatography works.	Chromatography involves a stationary phase paper) and a mobile phase (solvent – liquid). As the mobile phase moves over the stationary phase the ink dissolves and moves. Separation depends on the distribution of substances between the phases.
27	How can chromatography be used to determine if a substance is pure?	Pure substances will have only one spot. Mixtures will have two or more spots.
28	How are Retention Factors (Rf) calculated?	Rf = distance moved by substance/ distance moved by solvent
29	Describe the chemical test for hydrogen, oxygen & chlorine.	Hydrogen = Test: lit split; Observation: gives a squeaky pop. Oxygen = Test: glowing splint; Observation: relights. Chlorine = Test: litmus indicator paper; Observation: Turns white.
30	Describe the chemical test for carbon dioxide.	Test: Bubble carbon dioxide gas into limewater. Observation: the limewater will turn milky.
	Chemistry of the Atmosphere	
31	What are the main gases in today's atmosphere?	Nitrogen (approximately 80%) and Oxygen (approximately 20%).
32	How is it thought that the early gases in the atmosphere were produced?	Volcanic eruptions
33	What gases where thought to be in the early atmosphere?	Carbon dioxide (mainly), Nitrogen, Ammonia, Methane

34	What two main events led to the changes in the atmosphere during its evolution?	Earth cooled and water vapour condensed to form oceans. Plants evolved so photosynthesis occurred taking in carbon dioxide and releasing oxygen.
35	What effect do the greenhouse gases have on the Earth?	Greenhouse gases in the atmosphere maintain temperatures on Earth high enough to support life. Water vapour, carbon dioxide and methane are greenhouse gases.
36	How did carbon dioxide decrease in the early atmosphere?	Plants evolved using carbon dioxide for photosynthesis. Carbon dioxide dissolved in oceans getting locked up in sedimentary rocks and fossil fuels.
37	What two greenhouse gases are increasing due to human activity?	Carbon dioxide & methane
38	Name two human activities that have increased the amount of carbon dioxide in the modern atmosphere.	Burning fossil fuels, increased cars on roads.
39	Name three effects of global climate change.	Ice caps melt, sea levels rise, increased extreme weather e.g. hurricanes.
40	What is a carbon footprint?	The carbon footprint is the total amount of carbon dioxide and other greenhouse gases emitted over the full life cycle of a product, service or event.
41	What environmental problem does sulfur dioxide and oxides of nitrogen cause?	Acid rain
42	What environmental problem is caused by carbon particulates from a sooty flame?	Global dimming
43	Carbon monoxide is a toxic gas produced by what reaction?	Incomplete Combustion
	Using Resources	
44	What do humans use the Earth's resources for?	Warmth, shelter, food and transport.
45	What type of products are provided by natural resources?	Food, timber, clothing, fuels.
46	What is a finite resource?	A resource that is limited because it takes a long time (often millions of years) to form.
47	What is a sustainable development?	A development that meets the needs of current generations without compromising the ability of future generations to meet their own needs.
48	What is potable water?	Water that is safe to drink.
49	Name three sterilising agents used to make potable water.	Chlorine, ozone, ultraviolet light.
50	What are the stages involved in producing potable water?	Choosing an appropriate source of fresh water; passing the water through filter beds; sterilising.
51	If supplies of fresh water are limited, desalination of salty water or sea might be required. Describe how sea water could be desalinated.	Desalination can take place by distillation (heat the salty water, the water evaporates and then is condensed to collect pure water, all salts and water will be left behind) or reverse osmosis can be used.
52	Sewage treatment includes:	Screening and grit removal; sedimentation to produce sewage sludge and effluent; anaerobic digestion of sewage sludge; aerobic biological treatment of effluent.

53	Phytomining a method used to extract copper from low grade ores. How does this work?	Phytomining uses plants to absorb metal compounds. The plants are harvested and then burned to produce ash that contains metal compounds.
54	Bioleaching a method used to extract copper from low grade ores. How does this work?	Bioleaching uses bacteria so produce leachate solutions that contain metal compounds.
55	Life cycle assessments (LCAs) are carried out to assess the environmental impact of products in each of four stages. What are the three stages?	Extracting and processing raw materials; manufacturing and packaging; use and operation during its lifetime; disposal at the end of its useful life, including transport and distribution at each stage.
56	What happens when metals are recycled?	Metals can be recycled by melting and recasting or reforming into different products.

Citizenship

	Questions	Answers
	Life in Modern Britain	**Life in Modern Britain**
1	What are the principles and values that underpin British society?	The right to vote. Democracy. Human rights. Freedoms
2	What do we mean by identity?	How a person describes themselves as an individual.
3	What is cultural diversity?	The variety of people and backgrounds in an area.
4	What is the Media?	The biggest provider of information in the modern worlds. Forms of media can include Television, radio, books, newspapers, magazines, the cinema, the internet.
5	What is mass media?	A section of the media used to reach a very large audience. Includes newspapers, magazines, television and broadcasting.
6	What is a free press?	Where the press is allowed to publish thoughts, beliefs or opinions without interference from the government.
7	What is the role of the media and the free press?	To investigate and report on issues of public interest subject to the need for accuracy and respect for people's privacy.
8	What is censorship?	The control of information and ideas circulated within society.
9	How can citizens make their voice heard and make a difference in society?	Participation in democracy, Join and political group, Join a pressure group of campaign, Stand for elect, Show advocacy, Join a trade union, Use of the media
10	What are non-governmental organisations (NGOs)?	Non-profit groups that are independent from the government that are active in helping to make a change in their area of interest. They are usually funded by donations.
11	What is the European Council?	Meetings of heads of government of EU member states; they discuss the political direction and priorities of the EU.
12	What is NATO?	Military defence alliance with 28 members, each of which must spend 2% of their GDP on defence.
	Rights and Responsibilities	
13	What is a freedom?	Ability to do something without restraint.
14	What is the United Nation (UN)?	An international organisation that aims to facilitate cooperation throughout the world.
15	What are some basic rights of a British citizen?	Freedom of movement, Freedom of expression, Freedom to vote and stand for election, Freedom to have a fair trial

16	What are the universal human rights?	The UN Universal Declaration of Human Rights (1948), The European Convention on Human Rights (1953), The UN Convention on the Right of the Child (1990), The Human Rights Act (1998)
17	How do citizens play a part to bring about change in the legal system?	Joining an interest group, Campaigning, Advocacy, Lobbying, Petitions, Volunteering
18	What are civil liberties?	The set limit got government so that it cannot abuse its power and interfere with the lives of its citizens.
19	What responsibilities does a British citizen have?	To respect and obey the law, Respect the rights and beliefs of others, To pay taxes honestly and on time.
20	What are a citizen's rights and responsibilities within the legal system?	The age of criminal responsibility – being responsible for their action if they are in violation of the law, Right to be assumed innocent until proven guilty, Right to a fair trial.
21	Why is the Magna Carta so important to the formation of today's rights?	It established the principle that everyone is subject to the law and guarantees the rights of individuals, such as the right to justice and a fair trial.
22	What are different types of punishments used in court?	Custodial sentence, Fines, Rehabilitation, Community service
23	What is common law?	Law based upon judges' rulings in court
24	What is the UK Supreme Court?	Justices of the Supreme Court (judges) work together in the highest court of appeal to listen to cases
	Politics and participation	
25	What is democracy?	A system of government of the people of a country, by those people electing representatives to make laws and decisions. Effectively, power to the people.
26	What are the different forms of democracy?	Liberal democracy, Representative democracy, Direct Democracy
27	Where does political power reside in the UK and how is it controlled?	Parliament and the Head of State, it is controlled by democracy, giving the power to the citizens of the UK.
28	Why are some powers devolved?	Power is devolved to smaller governments to ease pressure on central government, and to allow smaller local governments to make decisions for their area that would not be important to other places.
29	What is First Past the Post?	A system of voting where the candidate or party is elected when they receive a majority of the votes.
30	What is proportional representation?	An electoral system in which parties gain seats in proportion to the number of votes cast for them.

31	Where does political power reside? Parliament, Government or Citizens?	Parliament – MPs are elected to represent their constituents, giving them the power from the people who voted for them. Government – the government was elected to lead the country and to create new legislation. Citizens – the people of the UK voted for their representatives, giving them power to choose who represents them.
32	How can citizens try to bring about political change?	Joining a political party. Joining a pressure group of campaign. Stand for election.
33	What is the role of pressure groups?	To raise awareness and put pressure on the government for the public interests.
34	Who is the head of State?	The Monarch
35	What are three forms of Government income?	Income tax, national insurance and Value Added Tax (VAT)
36	What is the main source of local government income?	Council tax
	Active citizenship	
37	What was your initial question or issue?	
38	How did you decide what issue to investigate?	
39	How did you carry out research for **primary** source information?	
40	How did you carry out research for **secondary** source information?	
41	State **two facts** you found for your primary research.	
42	State **two facts** you found for your secondary research.	
43	What was you **plan of action**?	
44	How did you put that **action to work**?	
45	Name five key points from the day of the Citizenship Fair for you and your group. *E.g. what did you do? Who did you talk to? Did it help with your investigation? Did you learn anything?*	
46	How **effective** or useful was your action?	
47	How could you have done your research and action **differently** to make it better?	
48	Did you reach a **conclusion** based on the work of your investigation topic?	
49	What citizenship **skills** did you use?	
50	How did you develop your **citizenship knowledge** (based on key citizenship **concepts**)	

Drama

	Questions	Answers
1	Who wrote Lovesong?	Abi Morgan
2	What is the basic plot of Lovesong?	A couple are coming to the end of their time together. One is terminally ill and they reflect upon their lives together.
3	What year/period is Lovesong set?	1960s/70s & present day
4	Where is Lovesong set (both country and space/building)?	USA/Kitchen, Bedroom, Garden.
5	Where was Lovesong performed?	Lyric Hammersmith.
6	Who directed Lovesong?	Scott Graham & Steven Hoggett
7	What theatre company do the directors belong to?	Frantic Assembly
8	What is the performance style of Lovesong?	Physical Theatre with elements of Naturalism.
9	What type of stage was Lovesong performed on?	Proscenium Arch
10	Who played younger Billy?	Edward Bennett
11	Who played older Billy?	Sam Cox
12	Who played younger Maggie?	Leanne Rowe
13	Who played older Maggie?	Sian Phillips
14	Who created the lighting design for Lovesong?	Andy Purves
15	Who was responsible for costume for Lovesong?	Lorna Price
16	Who created the set design for Lovesong?	Merle Hensel
17	Who created the sound design for Lovesong?	Carolyn Downing
18	Who created the projection in Lovesong?	Ian William Galloway & Adam Young
	Subjective Responses:	
19	What is the set for Lovesong (Bed, Table, Chairs etc.)?	
20	What do you think the set tells us about the characters, story and themes of Lovesong (consider the use of colour, style and age of the set)?	
21	Do you know where on the stage the various parts of the set are?	
22	What projection is used in Lovesong?	
23	When is projection used in Lovesong?	
24	What music/sound effects is/are used in Lovesong?	
25	When is/are music/SFX used in Lovesong?	
26	When is physical theatre used in Lovesong?	
27	Can you describe two different costumes for each character in Lovesong?	
28	Can you say what these costumes tell us about the characters in Lovesong?	

29	Can you describe three key moments when lighting is used effectively in Lovesong?	
30	Can you say which type of lights/lanterns were used in these key moments?	
31	Which two moments in Lovesong did you feel were the most effective?	
32	Can you say why they were effective?	
33	Can you quote three lines said by each of the characters in Lovesong?	
34	Can you explain the meaning behind these lines (include pitch, pace, tone & volume)?	
35	When (time period) is your version if DNA set?	
36	St Clement's High School – Drama Department	
37	What year was DNA first performed?	
38	Where was DNA first performed?	
39	What was the stage type DNA was originally performed on?	
40	Who directed the original performance?	
41	Who created the set, costume, and video design for the original performance of DNA?	
42	Who created the lighting for the original performance of DNA?	
43	How is your set design different from the original performance of DNA?	
44	How is your lighting different from the original performance of DNA?	
45	What music/sound effects will you use in your version of DNA (include artist and title)?	
46	Can you describe in detail how you set looks/works in two key scenes (including how the characters use the set in these scenes? Quoting lines also.)	
47	How will you use semiotics in your version of DNA?	
48	What is the performance style of your version of DNA?	
49	What is the structure of the play (why has Dennis Kelly written the play that way)?	
50	What are the themes of DNA?	
51	List as many rehearsal techniques as you can, that you could use to prepare an actor to play a character in DNA.	

English Language

	Questions	Answers
	Section A- THE READING SECTIONS	
	General Tips	
1	What should you do before you look at the questions?	Read the extract once before looking at the questions.
2	Which sections should you use for your answers?	Give answers only from the sections that they ask you to focus on.
3	What should you use to 'box off' each area of text?	Use a highlighter to 'box off' each area of text.
4	How can you 'Track the text'?	'Track the text' by jotting notes in the margin as you read it. This helps if you are struggling to understand it.
5	What can you do to the words in the question to help keep you focused?	Underline or circle key words in the question to keep you focused.
	Questions 1-2	
6	What do these questions want you to do?	These questions simply want you to 'go fetch' information.
7	How much information should you write down for these questions?	Give ONLY the information required- keep it short.
8	What punctuation must you use when quoting?	Use quotation marks.
	Question 3	
9	What should you do with the text now?	Re-read the text and highlight anything you think may answer the questions.
10	If you highlight something what must you do?	If you highlight it- annotate it- why did you highlight it?
11	What sorts of features should you try and label?	Try and add technical terms where you can.
12	What two things must you write about to ensure that your marks are not capped?	You **MUST** talk about language **AND** structure or your marks will be capped.
	Question 4 (or 6 on paper 2)	
13	As you re-read the extract what should you be doing?	Re-read the extract, highlighting anything that you think would answer the question.
14	Remember to use SITE. What does SITE stand for?	Use SITE (settings, ideas, themes and events) to guide you if you are stuck.
15	True or False? You have to write about all aspects of SITE?	You don't have to talk about all the ideas linked to SITE though.
16	True or False? You do not need to discuss language and structure in this question.	You do not need to discuss language and structure in this question.
	Question 7a on paper 2	
17	How many extracts are you comparing in this question?	In this question you are comparing the two extracts
18	What reading techniques will help you find differences between the two extracts?	Skim and scan to find similarities between the two.
19	How many links should you try to find?	Try to find three links.
20	What approach could you use to write up your answers?	One approach would be to use PEE LINK PEE.
	Question 7b on paper 2	
21	What are you doing to the two extracts in this question?	Again, you are comparing.

22	How many links should you aim to find in response to the question?	Try to find 5 links between the two in response to the question.
23	How much detail do you need in this question?	This question wants more detail so try to use PEEA LINK PEEA.
24	How can you support your connections?	Select evidence to support your connections.
	THE WRITING SECTIONS	
	General pointers	
25	How many marks are the writing sections worth?	This paper is worth 40 marks!
26	What % of you English grade is that?	That's 25% of your English grade. Spend enough time on it as this is a way to gain A LOT of marks.
27	How many marks are for SPAG?	16 of these marks are for SPAG- now is the time to proof read so build in checking time.
28	How many writing questions are there? How many do you need to do?	You will be given a CHOICE OF TWO writing tasks – you only need to complete *ONE.* The tasks are linked by a theme to the reading extracts you will have studied in Section A of the exam – you should be able to take some ideas from what you have already read to use in your writing.
	Paper 1- Creative writing	
29	Why is it important to PLAN your answer?	PLAN- failure to plan is planning to fail.
30	How many paragraphs should you plan to write?	In the plan, aim for 5 paragraphs. Number them. What would be the best order for you to use? Can you mix it up and put the ending at the beginning for example? Or perhaps use a cyclic narrative?
31	How can you 'mix up' your story structure for extra marks?	Keep your narrative and idea simple, don't over complicate it.
32	Are you allowed to adapt the question title to be more interesting and give it a little twist?	Can you adapt the question title to be more interesting and give it a little twist?
33	What three sections must your story have?	If you are struggling then make sure you simply have a clear beginning, middle and end.
34	What TWO things should you limit to be able to write the most effective narrative?	Limit the amount of characters you have. Limit your use of dialogue.
35	What THREE structural features should you try to deliberately include?	Attempt to deliberately include: Short sentences, Single word sentences, Single sentence paragraph
36	Think of three possible ways to make openings of sentences more effective.	A range of sentence openings such as: Using words ending in 'ly'. For example, 'Slowly, he….', Opening with a verb. 'Startled, she…', Using a preposition. 'Before this…', 'Beside me…'
37	What approach should you use to ensure you create a detailed and effective setting?	Focus on creating a hugely detailed setting- **show don't tell.**
38	One way to prepare for this exam is to write yourself a glossary of vocabulary. What does this mean you need to do?	Before the exam, create yourself a glossary- find 10 positively divine words, 10 sinister and powerful words, 10 negative words etc. and then try and include some of them in your writing.

39	True or False: you should avoid the phrase 'Me and my mates was…'?	AVOID 'Me and my mates was…'
40	What should you save 5 minutes for at the end of the exam?	Build in proof reading time.
41	What should go at the beginning and ends of sentences?	Capitql letters, Full stops
	Paper 2- Transactional writing	
42	What are the possible types of text you will be asked to write?	Make sure that you carefully take note of the purpose of your writing, the audience and the form. You could be asked to write the following: Letters, articles, reports, speeches, reviews, blogs, travel writing etc.
43	What must you do before you start writing?	Again, plan!
44	How many paragraphs should you aim to write?	Aim for 5-6 paragraphs for your piece of writing.
45	True or False: Even though these are non-fiction pieces of writing, still aim to show off your range of vocabulary, punctuation and sentence lengths?	Even though these are non-fiction pieces of writing, still aim to show off your range of vocabulary, punctuation and sentence lengths.
46	What does using the correct level of formality in your writing mean?	Make sure you use the correct formality. E.g. if you writing is for a head teacher, or is a report then you would need to be much more formal than if it were for a group of classmates.
47	What does IPERSUADE stand for?	If your writing needs to persuade or argue then remember IPERSUADE to show off techniques. Imperative, power of three, exaggeration/ expert opinion, repetition/ rhetorical questions, statistics, undermine others' opinions, anecdotes, direct address, and emotive language.
48	Do any facts and statistics you use need to be true?	No
49	True or false: If writing a newspaper article, you are expected to write in columns.	If writing a newspaper article, you are not expected to write in columns.
50	What ways are there to end a letter and why?	If writing a letter, remember how to end it by thinking: 'since I know you, I'll use sincerely'. So if you address the letter to someone's actual name then use 'sincerely'. If you don't know their name and use 'madam' or 'sir' for example, then use faithfully.

English Literature

	Questions	Answers
	Themes in Macbeth	
	Ambition	
1	What type of ambition does Macbeth recognise he has and could be his tragic flaw?	Macbeth recognises that he has 'vaulting ambition'. Remember: is this his tragic flaw?
2	Who influences Macbeth in the play to follow his ambition?	Macbeth seems to be susceptible to influence. His wife and the witches only act as catalysts to provoke the ambition that has always been there.
3	Why does Macbeth seem afraid of his ambition in the beginning of the play?	At the beginning of the play, Macbeth almost seems afraid of what ambition has awakened in him- it leads him to treason and underpins all of the Macbeth's decisions throughout the play.
	The Supernatural	
4	What are the multiple functions of witchcraft and wickedness in the play?	Witchcraft and its wickedness have multiple functions in the play. It exposes Macbeth's latent evil, they 'drive' his actions, it highlights the domino effect of evil in the world and creates a hugely atmospheric sense of the wrongness of a particular set of behaviours. Links to context- James I- determined to eradicate witchcraft
5	What links are there between the supernatural and madness?	Links between the supernatural and madness- Macbeth's hallucinations/ Banquo's ghost/Macbeth's 'addiction' or dependence upon the witches' prophecies
6	Lady Macbeth invokes dark spirits, why is this the key to her undoing?	Lady Macbeth invokes dark spirits: 'direst cruelty'- but this is the key to her undoing. Dark forces over power her and she cannot control them
7	What is the effect of using pathetic fallacy alongside the supernatural?	The supernatural is often accompanied by Shakespeare's use of pathetic fallacy- 'Thunder and lightning' indicates the imbalance that dark forces have upon the natural world
	Revenge	
8	What theme strongly links to revenge and why?	Revenge links powerfully to ideas of justice being served. Duncan asks for justice to be done from the exposition of the play- 'traitorous Cawdor'
9	Fill in the blanks for this quotation: '_____ will have _____'.	'Blood will have blood'.
10	What does Macduff's revenge achieve?	Macduff's vengeance rids Scotland of the tyrannical Macbeth. It is personal to him but also nationally important
	Kingship	
11	What type of king is Duncan at the beginning of the play? What purpose does he serve?	Duncan is fair and just; he provided the model of perfection which serves to reinforce the appalling rule of Macbeth. He serves as a 'foil'

12	How did people believe Kingship should be achieved at the time the play is set?	Kingship is not something that can be 'taken' or 'learnt'. Remember the Divine Right of Kings as a relevant piece of context
	Appearance versus Reality	
13	What does this quotation suggest: 'look like the innocent flower but be the serpent under it'?	Things are not as they appear: 'look like the innocent flower but be the serpent under it'
14	What could be said about the appearance versus reality of the witches' prophecies?	The witches' prophecies are double edged and plagued with ambiguity
15	What does Macbeth think that Kingship will be like and what is the reality of it?	Kingship and rule are not as simple as Macbeth thinks/feels
	A Christmas Carol	
16	Who is the central character in the story?	Scrooge
17	How many ghosts visit Scrooge in total?	3
18	What is Scrooge's assistant and his son called?	Bob Cratchit and Tim Cratchit
19	Why can A Christmas Carol be read as a moral tale?	A Christmas Carol *can be read as a moral tale, showing what can happen to a man who is consistently self-centred and unkind.*
	Theme of Christmas	
20	What transformation in Scrooge is highlighted through the theme of Christmas?	To highlight Scrooge's transformation from miser to cheerful man.
21	What characteristics of Christmas does Scrooge's nephew Fred represent?	To show the importance of compassion and forgiveness, as represented by Scrooge's nephew.
22	What Christmas related values do the Cratchit's represent?	To explore the importance of love and family, as shown through the Cratchits.
	Theme of redemption	
23	How is Scrooge presented at the beginning of the play?	Scrooge beginning as miserable and miserly
24	What do the ghosts reveal to Scrooge?	Scrooge seeing the error of his ways
25	How has Scrooge changed by the end of the story?	Scrooge transforming and redeeming himself
	Scrooge changes	
26	How does Scrooge react to the news that Tiny Tim might die?	He is upset at the thought that Tiny Tim might die.
27	What words of Scrooge's does the Ghost of Christmas Present use against him?	The Ghost of Christmas Present uses his own cruel words against him.
28	Why does the Ghost of Christmas Present show Scrooge scenes of family celebration?	He sees what he is missing in the family scenes of celebration.
	Social injustice	
29	What were Dicken's views on social injustice?	Dickens felt strongly that Victorian society ignored the poverty of its underclass. On the one hand were the rich who enjoyed comfort and feasting at Christmas, and on the other were children forced to live in dreadful conditions in workhouses.

	An Inspector Calls	
	Key Themes:	
30	What are the six main themes in the play?	Wealth, Power and influence, Blame and responsibility, Public versus private, Class politics, Morality and legality
31	When is the play set?	1912
32	When was the play first performed?	1946
33	Which characters share the surname Birling?	Arthur, Sybil, Sheila, Eric,
34	Who is Sheila engaged to?	Gerald Croft
35	What is the name of the Birling's servant?	Edna
36	What are the names used by the girl who takes her own life?	Eva Smith/ Daisy Renton
	Foreshadowing	
37	What does Sheila wonder about Gerald and his behaviour? What does it foreshadow?	Sheila wonders why Gerald was so busy the previous spring and summer, and it is because he was having an affair.
38	What does Eric increase doing over the course of the play?	Eric's drinking increases over the course of the play and is brought up early on.
39	What does the Inspector suggest may happen as a result of their selfish behaviour?	The Inspector hints at global catastrophe, or world war, that might follow selfish behaviour.
40	What does Priestley use the characters of Eric and Sheila to foreshadow?	J.B Priestley uses Eric and Sheila - to suggest that the young people of a post-war Britain would be the answer to a hopeful future.
41	How does Priestley use Gerald to attack upper class society?	Priestley uses Gerald to attack the upper-classes of post-war Britain.
42	What concerns about society does Priestley use the Inspector to highlight?	Inspector Goole sheds a light on all the concerns that Priestley had at the time of writing *An Inspector Calls* around age, gender, class and social responsibility. Priestley uses the Inspector to make the audience question their own behaviour and morality and hopes that they will learn some lessons as the Birlings do. The issues the Inspector highlights are just as relevant to a modern day audience.
43	What is the effect of repetition in this quotation: "there are millions and millions and millions of Eva Smiths and John Smiths still left with us"? Who says it?	Repetition of millions emphasises his point that Eva is representative of many others. Said by the Inspector.
44	What is the effect of the emotive words in this quotation: "their lives, their hopes and fears, their suffering and chance of happiness, all intertwined with our lives"? Who says it?	Use of emotive words helps us empathise with the victims like Eva Smith. Said by the Inspector.
45	What comment can you make about the sentence structures in this quotation: "We don't live alone. We are members of one body. We are responsible for each other"? Who says it?	Three short sentences have enormous impact and sum up his point very simply and clearly. Said by the Inspector.

46	What does this terrifying imagery represent: "fire and blood and anguish"?	Almost biblical, a terrifying image. Unlike Mr Birling, Inspector Goole's predictions are correct - Britain experiences two world wars. This makes him a more trustworthy character and also emphasises Priestley's views.
47	What does the character of Mr Birling represent?	Mr Birling represents greedy businessmen who only care for themselves. Priestley uses him to show the audience that the Eva Smiths of the world will continue to suffer if people like Birling remain in positions of power.
48	What is the effect of the possessive pronoun in this quotation: "my duty to keep labour costs down"? Who says it?	Use of 'my' shows his arrogance, 'duty' suggests he feels an obligation to do this. Said by Mr Birling.
49	What does the structure of this quotation tell you about Mr Birling's attitude: "Does that satisfy you? So I refused."?	Asks a question and then answers it himself. Not interested in the views of others.
50	What is ironic about this quotation: "It's a free country"? Who says it?	It might be 'free' for someone who has money and power, however, Eva Smith had neither. Said by Mr Birling

French

	Questions	Answers
	To say what there is, was, will be	
1	Il y a…	There is/there are…
2	Il y avait …	There was/there were…
3	Il y aura…	There will be…
	Essential words	
4	C'est…	It is..
5	C'était…	It was..
6	Ce sera…	It will be…
	Essential time expressions	
7	Hier	yesterday
8	demain	tomorrow
9	la semaine prochaine	next week
10	le week-end prochain	next week-end
11	Quand j'étais plus jeune…	When I was younger…
	Verbs you can use in different contexts	
12	Je mange, J'ai mange, Je vais manger	I eat, Ihave eaten/I ate, I will eat
13	Je bois. J'ai bu, Je vais boire	I drink, I have drunk/I drank, I will drink)
14	Je fais, J'ai fait, Je vais faire	I do, I have done/I did, I will do
15	Je rencontre, J'ai rencontré, Je vais rencontrer	I meet, I have met/I met, I will meet
16	Je rends visite à, J'ai rendu visite à, Je vais rendre visite à	I visit, I have visited/I visited, I will visit)
	(Use the above when you visit a person)	(Use the above when you visit a person)
17	Je visite, J'ai visité, Je vais visiter	I visit, I have visited/I visited, I will visit
	(Use the above when you visit a place or a monument)	(Use the above when you visit a place or a monument)
18	Je prends, J'ai pris, Je prendrai	I take/I have (a bath-a drink, I have taken/I took, I will take
19	J'achète, J'ai acheté, J'achèterai	I buy, I have bought/I bought, I will buy
20	Je vois, J'ai vu, Je verrai	I see, I have seen/I saw, I will see
21	Je voyage, J'ai voyage, Je voyagerai	I travel, I have travelled/I travelled. I will travel
22	Je regarde, J'ai regardé, Je regarderai	I watch, I have watched/I watched, I will watch
23	Je sors, Je suis sorti(e), Je sortirai	I go out, I have gone out/I went out, I will go out)
	Use "aller" (to go) correctly	
	Je vais	
	Il/elle va	
	Nous allons	
	Ils/elles vont	
	aller **au** cinéma/**au** stade/**au** centre-sportif/**au** restaurant/**au** concert/au (here, « aller » is followed with mascculine words so « **à** » becomes « **au** »)	
	aller **à la** piscine/**à la** plage/**à la** fête)	
	(here « aller » is followed with feminine words so « au » becomes « à la »)	
	aller **à l'**anniversaire	
	(here "aller" is followed by a word that starts with a vowel so "**à**" becomes "**à l'**")	
	aller **aux** magasins	
	(here « aller » is followed with a word in the plural, so « **au** » becomes « **aux** »)	
	je vais/je suis allé(e)/**chez** mon copain/ma copine	
	Je vais/je suis allé(e) **en** ville	

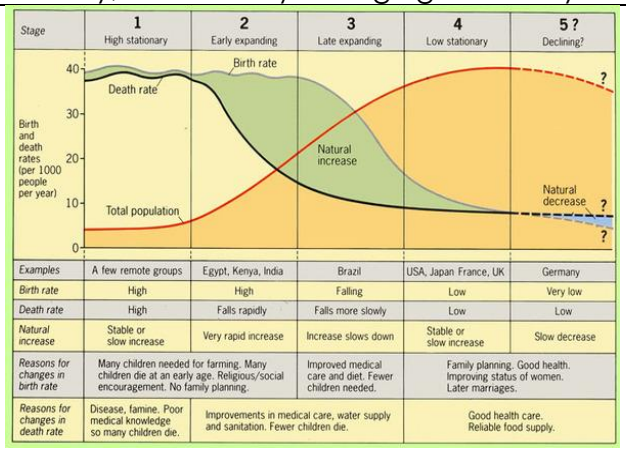
	<u>To extend your answers by explaining what you *must/mustn't do what you can/cannot do what you need to do*</u>	
	Il faut……	
	Il ne faut pas ……	
	On doit.....	
	On ne doit pas	
	On peut	
	On ne peut pas	
	On doit.....	
	On ne doit pas	
	On peut…..	
	On ne peut pas….	
	J'ai besoin de...	
	REMEMBER: **all of these phrases are followed with a verb in the infinitive.**	For example: On doit porter un uniforme (We must wear a uniform)
	<u>Common mistakes to avoid</u>	
	passer:	to spend (time) – to take (an exam)- (not to pass an exam)
	rester:	to stay (not to rest)
	travailler:	to work (not to travel)
	une journée:	a day (not a journey)
	la matinée	the morning (not "the matinee")
	le travail:	work (not the journey)

Geography

	Questions	Answers
	The Challenges of Natural Hazards	
1	Name the type of plate boundary where two plates are moving towards each other.	Destructive
2	Why do volcanoes form at destructive plate boundaries?	The oceanic plate is forced under the lighter continental plate. Friction causes melting of the oceanic plate and may trigger earthquakes. Magma rises up through cracks and erupts onto the surface as a volcano.
3	Give two primary and two secondary effects of a volcanic eruption.	The effects of volcanic eruptions can be divided into primary and secondary effects. The primary effects are immediate and come from the eruption itself whereas the secondary effects result from the primary effects. Typical answers might be: Primary: Lava flows, volcanic gases, pyroclastic flows, death, buildings destroyed. Secondary: Food / water supply interrupted, homelessness, businesses forced to close, cost of insurance claims, unemployment.
4	Why do people live in areas prone to tectonic hazards?	Typical answers might be: tourism, fertile soil surrounding the volcano, cheap geothermal energy.
5	Describe one method of management to reduce the effects of a tectonic hazard.	Students are likely to discuss 'duck, cover and hold' which is an earthquake drill used in schools and other public buildings. Better construction techniques, to prevent buildings collapsing, may also be discussed.
6	Describe the distribution of tropical storms.	Tropical storms usually form between approximately 5° and 30° latitude around the tropics of Cancer and Capricorn.
7	Describe four primary and four secondary effects of tropical storms.	Typical answers might be: **Primary**: High winds, torrential rain, storm surges at landfall, costal buildings destroyed, death. **Secondary:** Costs of repairing any damage caused, insurance claims will be made, whilst businesses are closed, earnings (and profits) will be lost, crops may be damaged, people could be without power supplies
8	Give one piece of evidence for the weather becoming more extreme in the UK.	Students are likely to comment on summers becoming warmer, with more frequent droughts, or winters becoming wetter with more extreme rainfall.
9	What are three natural factors that can cause climate change?	Volcanic eruptions, changes in the earth's orbit around the sun, changes in the suns output.
10	Give three impacts of climate change.	A wide range of answers from students are possible. Correct answers are likely to include: rising sea levels, glacial melting, increased drought, certain animals become extinct.

	Ecosystems	
11	What is an ecosystem?	A standard definition would be: ***An ecosystem is a large community of living organisms (plants, animals and microbes) in a particular area. The living and physical components are linked together through nutrient cycles and energy flows.***
12	Describe the climate of tropical rainforests.	Very wet with over 2,000 mm of rainfall per year. Very warm with an average daily temperature of 28°C. The temperature never drops below 20°C and rarely exceeds 35°C. The atmosphere is hot and humid. The climate is consistent all year round. There are no seasons.
13	Describe three ways that plants are adapted to living in tropical rainforests.	A wide range of responses are possible. However, students might typically write: **Drip tips** - plants have leaves with pointy tips. This allows water to run off the leaves quickly without damaging or breaking them. **Tree trunks** - these are tall and thin to allow trees to reach the sunlight. The bark on these trees is smooth to allow water to flow down to the roots easily. **Lianas** - these are woody vines that have roots in the ground but climb up the trees to reach the sunlight. Their leaves and flowers grow in the **canopy**.
14	Describe the climate of a hot desert.	Deserts have extreme temperatures. During the day the temperature may reach 50°C, when at night it may fall to below 0°C. Deserts have less than 250 mm of rainfall per year. The rain can be unreliable.
15	Give two adaptions of animals to hot desert environments.	The ability to go for a long time without water - they lose very little through urination and sweating. A Fatty hump which provides energy in times of food shortages.
16	Explain how tree planting can reduce the risk of desertification.	The roots of trees hold the soil together and help to reduce soil erosion from the wind. This prevents an area turning to sand.
	The UK physical landscape	
17	What is the difference between erosion and weathering?	Erosion is the process in which material is worn down and moved, whereas weathering occurs in situ (one place – material is moved).
18	Name the four types of erosion	Hydraulic action, abrasion, attrition, corrosion.
19	What are the four processes of transportation?	Traction, saltation, suspension and solution.
	Coastal Landscape	
20	Give the characteristics of a destructive wave.	The characteristics of a destructive wave are: weak swash and strong backwash, the strong backwash removes sediment from the beach, the waves are steep and close together.

21	Explain the formation of caves, arches, stacks and stumps.	**Cracks** are widened in the headland through the erosional processes of hydraulic action and abrasion. As the waves continue to grind away at the crack, it begins to open up to form a **cave**. The cave becomes larger and eventually breaks through the headland to form an **arch**. The base of the arch continually becomes wider through further erosion, until its roof becomes too heavy and collapses into the sea. This leaves a stack (an isolated column of rock). The stack is undercut at the base until it collapses to form a stump.
22	How do sand dunes form?	Sand dunes are small ridges or hills of sand found at the top of a beach, above the usual maximum reach of the waves. They form from wind blown sand that is initially deposited against an obstruction such as a bush, driftwood or rock. As more sand particles are deposited the dunes grow in size, forming rows at right angles to the prevailing wind direction. If vegetation, such as Marram Grass and Sand Couch, begins to grow on the dune its roots will help to bind the sand together and stabilise the dunes.
23	Describe the difference hard engineering and sift engineering coastal management.	Hard engineering is a coastal management technique used to protect coasts, by absorbing the energy of waves, preventing erosion and flooding. They are highly visible man-made structures used to stop or disrupt natural processes. Soft engineering works with nature to protect the coast rather than trying to stop natural processes.
24	Name two soft engineering strategies for a coastal area.	Beach nourishment and managed retreat.
	River Landscapes	
25	Describe the cross profile of a river's lower course.	The channel is wild and deep.
26	Where do waterfalls form?	Waterfalls forms in the upper course of a river but can occasionally be found in the middle course.
27	Explain how an ox-bow lake is formed.	Due to erosion on the outside of a bend and deposition on the inside, the shape of a meander will change over a period of time. Erosion narrows the neck of the land within the meander and as the process continues, the meanders move closer together. When there is a very high discharge (usually during a flood), the river cuts across the neck, taking a new, straighter and shorter route. Deposition will occur to cut off the original meander, leaving a horseshoe-shaped oxbow lake.
28	What is a flood plain?	A flat area of land in the lower course of the river that frequently floods.

29	What is lag time?	The time between peak rainfall and peak discharge.
30	Describe how channel straightening reduces the risk of flooding.	Straightening the river speeds up the water so high volumes of water can pass through an area quickly.
	Urban Issues and Challenges	
31	What is a megacity?	A city with a population of more than 10 million people.
32	Why is urbanisation taking place more rapidly in LIC's?	Urbanisation is taking place more rapidly in LIC's due to an increasing number of people moving from rural to urban areas. Urban areas also usually have higher birth rates, increasing the population size over time.
33	Explain two problems of rapid urban growth in a LIC or NEE.	Slum housing and increased traffic congestion.
34	Explain how an urban planning scheme is improving life in an LIC or NEE.	Students should discuss the redevelopment of the Dharavi slum in Mumbai.
35	Describe the distribution of population in the UK.	The South East of England, including London, have the highest population density of the UK. The lowest population densities are found in Scotland, Wales and Northern Ireland.
36	Explain why secondary employment has declined in one UK city.	Secondary employment has declined in London due to an increasing number of factories moving to China and other Asian countries.
37	Explain how transport is being improved in one city in a HIC.	Cross rail in London aims to increase the capacity of the Underground. This new line will open in sections during 2019.
38	What is urban sprawl?	The spread of urban areas into what use to be the countryside.
39	What does sustainable urban living mean?	A lifestyle that attempts to reduce an individual's or society's use of the Earth's natural resources
40	Give two economic problems caused by traffic congestion in urban areas.	People arrive late to work, meaning they are less productive. Health problems, due to air pollution, is likely to be higher in areas with high traffic congestion. Consequently, people are likely to have more time off work, which is bad for the economy.
	The Changing Economic World	
41	What is development?	Improvements in quality of life
42	What do HIC, LIC and NEE stand for?	HIC = High Income Country, LIC= Low Income Country, NEE= Newly Emerging Economy
43	Describe the five stages of the demographic transition model.	

44	What is Nigeria's current level of development?	NEE
45	Describe the advantages and disadvantages of one TNC in Nigeria.	Students are likely to have been taught about Shell. A wide range of points could have been made, but advantages are likely to focus on Shell's contribution to Nigeria's economy (70% of all government money comes from Shell). Disadvantages are likely to focus on the environmental impact, such as oil leaking into fresh water supplies.
46	What are the main causes of economic change in the UK?	Deindustrialisation – the movement of factories and industry from the UK to Asia from the 1960's to the 1980's
47	What is a secondary job?	A job in manufacturing.
48	Why has there been an increase in the number of science parks in the UK?	The growth of universities has led to increase demand for scientific, technological and research based jobs. These jobs are often clustered together, close to Universities, creating 'science parks'.
49	What is the north-south divide?	The economy of the south has grown much quicker than the north of the UK. There is more jobs and wealth in the south compared to the North.
50	Give examples of how the UK is linked with other countries.	The UK is linked to the rest of the world through membership of the EU, UN and Commonwealth.

History

	Questions	Answers
1	What were the Four Humours	Black Bile, Yellow Bile, Phlegm, Blood
2	Jenner discovered…	Vaccination for Smallpox
3	When was Pasteur's Germ Theory	1861
4	Who designed the Pavillion Plan style hospitals?	Florence Nightingale
5	What are the FACTORS that affected Medicine?	Institutions (Government, The Church), Science, Technology, Individuals, Attitudes, War
6	Name 3 individuals in the Renaissance…	Thomas Sydenham, Vesalius, Harvey
7	How did the Government intervene with Public Health in the 19th Century	Public Health Act 1875
8	Who invented agar jelly and stronger microscopes helping him to identify germs and create vaccines	Robert Koch
9	When was the Black Death and the Great Plague?	Black Death 1348, Great Plague 1665
10	What was the order evacuation chain in the trenches?	RAP, ADS, CCS, Base Hospital, Home
11	What key battles were there in WWI?	Ypres, Passchendaele, Somme, Arras
12	Which battle first saw the use of Chlorine gas?	2nd Battle of Ypres
13	What were the 3 early cold war conferences?	Tehran, Yalta, Potsdam
14	When was the Hungarian Uprising?	1956
15	Who was responsible for the Prague Spring?	Dubcek
16	What decade was Détente in?	1970s
17	Give 3 of the satellite states	Hungary, Poland, Romania, Czechoslovakia, Bulgaria, 'East Germany'
18	When was the Truman Doctrine?	March 1947
19	What economic package resulted from the Truman Doctrine?	Marshall Plan
20	What were the group of countries called in the West and the East?	West – NATO, East – Warsaw Pact
21	What were the key features of the Berlin 1 crisis?	Bizonia/Trizonia, Blockade, Airlift
22	What were the key features of the Berlin 2 crisis?	Refugee Crisis, Ultimatum, Berlin Wall
23	How was the USA and USSR's building up of their weapons described?	Arms Race
24	What word describes the economy of the West?	Capitalist
25	Give 3 of Elizabeth's initial problems	Debt, Religion, Legitimacy, Gender, War with France
26	What key battle took place in 1588?	Spanish Armada

27	When did Mary, Queen of Scots arrive in England?	1568
28	When did Elizabeth become queen?	1558
29	What were to two parts of Elizabeth's new religion?	Act of Supremacy, Act of Uniformity
30	What title did Elizabeth give herself?	Supreme Governor of the Church of England
31	How many Protestants did Elizabeth's sister Mary burn?	284
32	What was Elizabeth's new religion called and when was it passed?	The Religious Settlement, 1559
33	What was the name of the murder and torture the Spanish inflicted on the Dutch Protestants?	Spanish Inquisition
34	Who was king of Spain?	Philip II
35	Give all 5 parts of Elizabeth's government	Parliament, Privy Council, JPs, Monarch, The Court
36	Who was Elizabeth's spy master?	Walsingham
37	Who was Elizabeth's chief advisor?	Cecil
38	What name is given to high up church officials?	Clergy
39	What do we call the new government that replaced Kaiser Wilhelm II?	Weimar Republic
40	When was the Treaty of Versailles?	40 28 June 1919
41	Give 4 main terms of the Treaty of Versailles (B.R.A.T)	Blame (War Guilt Clause 231), Reparations (£6.6B), Army (100,000, 0 Airforce, 6 Battleships), Territory (11 African colonies, Alsace Lorraine, Saar Coalfields)
42	What was Hyperinflation and when was it?	Value of the currency became worthless RAPIDLY, 1923
43	Who helped Germany recover following the economic crisis of 1923	Stresemann
44	What was Hitler's planned takeover called and when was it?	Munich Putsch, Nov 1923
45	How long was Hitler's sentence and how long did he serve?	5 years – 9 months
46	When did Hitler become chancellor?	30th January 1933
47	When was the Night of the Long Knives and what key Nazi was killed?	June 1934, Ernst Rohm (head of SA)
48	Give 3 forms of terror the Nazis used	Gestapo, SD, Concentration Camps, Law Courts, SS
49	Give 3 forms of Propaganda the Nazis used following 1934…	Media (radios and newspapers), Architecture (Power and Permanence), Sport (Olympics 1936), Music, Literature, Art, Cinema
50	Give 5 enemies of the state who probably ended up in a camp	Jews, Disabled, Political opponents, Gypsies, Homosexuals, Workshy, Communists, Pacifists, Intellectuals, Religious extremists, Germans who bought from Jews

Maths

	Questions	Answers
1	Give the formula for the area of a rectangle.	Area = length x width
2	What does the symbol ≤ mean?	Less than or equal to
3	What does BIDMAS stand for?	Brackets, indices, division, multiplication, addition, subtraction
4	Name the type of triangle that has two sides of equal length.	Isosceles
5	What is the 12th multiple of 5?	60
6	How many factors does a prime number have?	2
7	What is the formula for the area of a circle?	πr^2
8	What is the size of an interior angle in an equilateral triangle?	60°
9	An angle is considered obtuse if it is between which two values?	90 and 180
10	What is the name given to the longest side of a right-angled triangle?	Hypotenuse
11	What is the missing numerator? $\cos = \frac{?}{hypotenuse}$	Adjacent
12	By what number should you multiply a decimal to convert it to a percentage?	100
13	What is the only even prime number?	2
14	An angle is considered reflex if it is between which two values?	180 and 360
15	Give the formula for the area of a parallelogram.	base x height
16	What is the formula for the area of a triangle?	$\frac{1}{2} \times base \times height$
17	What is the smallest square number?	1
18	Give the definition of parallel lines.	0 **OR** 1
19	What is the result when any number is raised to the power of zero?	1
20	Give the value of π to three significant figures.	3.14
21	Give a two-digit number that is both a square and cube number.	64
22	An angle is considered acute if it is between which two values?	0 and 90
23	What angle is made between two perpendicular lines?	90°
24	What is the formula for the volume of a cylinder?	Volume = $\pi r^2 h$
25	A pair of angles that are co interior will add to make what number?	180°
26	For a shape to be considered regular, what two properties must it have?	All sides of equal lengths and all angles of equal sizes
27	What is the definition of the word 'percentage?	Parts per hundred
28	How many cm^2 are in 1 m^2?	10,000

29	What 4 rules can be used to prove that two triangles are congruent?	In any order: SSS, ASA, RHS, SAS
30	What is the name given to a triangle that has no sides of equal length?	Scalene
31	What is the missing numerator? $\sin = \frac{?}{hypotenuse}$	Opposite
32	What is the formula for the circumference of a circle?	πd OR 2πr (both are acceptable)
33	What is the formula for the area of a trapezium?	$\frac{a+b}{2}$ × h
34	What type of triangle has 3 sides of equal length?	Equilateral
35	What is the missing numerator? $\tan = \frac{?}{adjacent}$	Opposite
36	What is Pythagoras' Theorem?	$a^2 + b^2 = h^2$ **OR** $a^2 + b^2 = c^2$
37	What is the size of an interior angle of a regular pentagon?	108°
38	What is the general name given to an 8-sided polygon?	Octagon
39	What is the smallest prime number?	2
40	What is the formula for the volume of a pyramid?	$\frac{length \times width \times height}{3}$
	Higher only	
41	What is the quadratic formula?	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
42	What is the cosine rule?	$a^2 = b^2 + c^2 - 2bcCos(A)$ $b^2 = a^2 + c^2 - 2acCos(B)$ $c = a + b^2 - 2abCos(C)$
43	What is the sine rule?	$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$
44	Give a reason why 1 is not a prime number.	It only has one factor, and for a number to be prime it must have two factors.
45	What is the value of sin(x) when x=90?	1
46	Raising a number to the power of 0.5 is equivalent to which other process?	Square rooting the number
47	What symbol represents a mathematical identity?	≡
48	What is the name given to a straight line that touches a circle but does not intersect it?	Tangent
49	What is the reciprocal of 0.25?	4
50	Give a reason why 0 is an even number.	0 is a multiple of 2 (2 x 0 = 0) so therefore it is even.

Music

	Questions	Answers
	Set work 1 – Bach: Brandenburg Concerto No. 5 in D major (3rd Movement)	
1	What period was this composed in?	**BAROQUE** period.
2	What is this piece an example of? Basso Continuo, Concerto Grosso, Figured Bass	**CONCERTO GROSSO**.
3	What are the two separate groups called, and what instruments are in each one?	**CONCERTANTE,** Solo instruments (Flute, violin and Harpsichord), **RIPIENO** the accompanying group (violin, viola, cello, double bass)
4	What is the name for the group of instruments playing the bass line, and what are they?	**BASSO CONTINUO** (cello, double bass and harpsichord)
5	What is the word used to indicate that the harmony uses the chords from the scale, rather than any extra chords?	Harmony is **DIATONIC**
6	What is the term used for dynamics that are either loud or quiet – no gradual changes?	**TERRACED DYNAMICS**
7	Which ornaments are featured in the melody?	**TRILLS** and **APPOGGIATURAS**.
	Set Work 2 – Beethoven: Piano Sonata No. 8 in C minor Op. 13, 'Pathetique' (1st mvt)	
8	What period was this composed in?	Published in 1799 – the **early ROMANTIC** period.
9	What is the structure of the piece, and what are the names of the separate sections?	**SONATA FORM**: the sections are called **EXPOSITION, DEVELOPMENT, RECAPITULATION**. There is also a **SLOW INTRODUCTION.**
10	The piece is difficult to play – what is the term to describe this and give examples?	**VIRTUOSIC** – crossed hand playing and rapid scale passages.
11	What key is it in, and what is unexpected about the key change in the 2nd subject?	**C minor** and the 2nd subject is in **E*b* minor** (rather than major)**.**
12	What is the main texture throughout the piece?	**HOMOPHONIC**
13	What is the difference between **Common** time and **Cut Common** time?	**Common** time has **four** beats in a bar, **Cut** Common has **two.**
	Set work 3 – Purcell: Music for a While	
14	What period was this composed in, and why was it written?	**BAROQUE** period, as **INCIDENTAL MUSIC** to be performed as part of a play.
15	What is it written for?	**SOPRANO** and **CONTINUO (harpsichord, bass viol, lute).**
16	What is the name of the music the harpsichord player uses?	**FIGURED BASS**.
17	What is the structure of the piece?	**GROUND BASS**.
18	What is the term used when the music portrays the meaning of the words?	**WORD PAINTING**
19	Is the word setting mainly **SYLLABIC** or **MELISMATIC?**	Mainly **SYLLABIC,** with occasional **MELISMA** (e.g. eternal)

20	What is the name of the cadence where the final chord is major instead of minor?	**TIERCE DE PICARDIE**
	Set work 4 – 'Killer Queen' (from the Queen album Sheer Heart Attack)	
21	When was this written?	**1974**
22	How is the effect of a choir created?	**OVERDUBBED** vocals (performed by Freddie Mercury).
23	How is technology used to help create word painting?	**PHASE SHIFTER** (on the lyric 'laser beam')
24	What effects are added to the guitars?	**DISTORTION** and **WAH WAH.**
25	What is the basic structure of the piece?	**VERSE AND CHORUS** form with intro/outro and instrumental sections.
26	What is the tonality of the piece?	**E*b* major**, but it is ambiguous and some sections start in **C minor** or **B*b* major**
	S**et work 5 – Steven Schwartz: 'Defying Gravity' (from the musical Wicked)**	
27	What is Wicked based on, and where does this piece come from in the musical?	**THE WIZARD OF OZ**, this song is the **FINALE** of Act 1.
28	Apart from the two solo singers, what is the piece written for?	A **LARGE PIT ORCHESTRA** (with electronic and acoustic instruments).
29	What is special about how it is written out in the anthology?	It is a reduction called a **SHORT SCORE**
30	What is the name of a short phrase that represents a character, and what is the 'Unlimited' based on?	**LEITMOTIF.** The 'Unlimited' leitmotif quotes the first 7 pitches of 'Somewhere Over the Rainbow'
31	What rhythmic feature is used throughout the piece?	**SYNCOPATION**
32	What is the structure?	**VERSE/CHORUS** structure with some variations
33	How could the word setting be described?	**SYLLABIC**
	Set work 6 – John Williams: 'Main Title/'Rebel Blockade Runner' (from Star Wars: Episode IV – A New Hope)	
34	What is it written for?	**SYMPHONY ORCHESTRA** of nearly 90 players
35	What is the structure, and what has influenced it?	**ABA TERNARY FORM** starting with a **FANFARE.** The structure is dictated by the visual images
36	What kind of harmony/chord is used extensively, and how is it created?	**QUARTAL** harmonies, where the chord is built up of intervals of a 4^{th}
37	What is the tonality and how does it change?	It opens in **B*b* major**, then the second part is far more **DISSONANT** and almost **ATONAL** at times.
38	Which intervals feature heavily in the melodies?	**4^{th}** and **7^{th}**.
39	What is the term for a short melody denoting a particular character or theme?	**LEITMOTIF**
	Set work 7 – Afro Celt Sound System: 'Release' (from the album Volume 2: Release)	
40	When was the song released?	**1999**

41	Which three cultures are featured, and what is heard from each?	**African** (Kora, Djembe, Talking Drum, **Celtic** (Uilleann Pipes, Fiddle, Accordion, Bodhran, Hurdy-Gurdy, male vocal, **Western** (Drum Kit, Synthesisers, Electric Piano, Digital Effects, female vocal)
42	How is the music built up?	**LOOPS** combined together in various ways
43	What is the tonality?	**MODAL**
44	How could the melodic range be described?	**PENTATONIC** (using only 5 notes)
	Set work 8 – 'Samba Em Preludio', performed by Esperanza Spalding (from the album Esperanzo)	
45	What are the two styles featured in the **BOSSA NOVA**?	**SAMBA** and **JAZZ**
46	What is it written for?	**FEMALE VOICE** (with a **LOW TESSITURA**), mostly accompanied by an **ACOUSTIC BASS GUITAR** with some use of **ACOUSTIC GUITAR**
47	What is the tonality?	**B minor** with frequent **CHROMATIC** notes.
48	What is a feature of the harmony?	**CHORD EXTENSIONS** (7ths, 9ths 11ths and 13ths) are used.

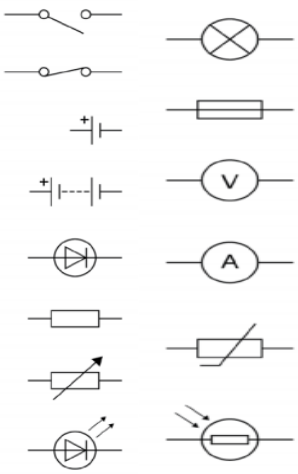
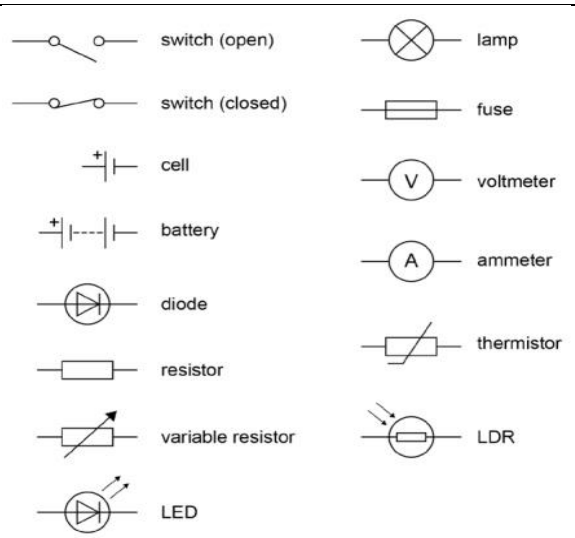
PE

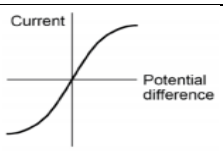
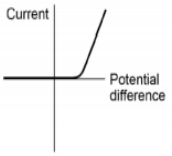
	Questions	Answers
1	Define the term AEROBIC	'with oxygen'. If exercise is not too fast and is steady, the heart can supply all the oxygen muscles need.
2	What is ALVEOLI?	Air sacs where gaseous exchange takes place
3	What is an ANABOLIC STERIODS?	Drugs that mimic the male sex hormone testosterone and promote bone and muscle growth
4	Define the term ANAEROBIC	'without oxygen'. If exercise is done in short, fast bursts, the heart cannot supply blood and oxygen to the muscles as fast as the cells use them
5	What is the role of ANTAGONIST within an antagonist pair?	Relaxing muscle allowing movement
6	What is the AORTA?	Main blood vessel leaving the heart
7	What is muscle ATROPHY?	When muscle reduces in size because of lack of exercise
8	What is BETA-BLOCKERS?	Drugs that are used to control heart rate and that have a calming and relaxing effect
9	What is BLOOD DOPING?	Is a banned method of improving performance that does not involve the use of drugs
10	Define the term BLOOD PRESSURE	The force exerted by circulating blood on the walls of the blood vessels
11	Define the term BODY COMPOSITION	The % of body weight that is fat, muscle and bone
12	Describe CARBOHYDRATE-LOADING	Building up glycogen stores in the body to use in endurance events
13	Define the term CARDIAC OUTPUT	The amount of blood ejected from the heart in one minute
14	What is CARTILAGE?	Tough, flexible tissue, can be found at the end of bones
15	Describe CIRCUIT TRAINING	A series of exercises completed in order and for a certain time
16	What is the role of the CIRCULATORY SYSTEM?	Transports blood using the heart and blood vessels
17	Define the term COMPOUND/OPEN FRACTURE	The bone breaks and comes through the skin
18	Describe CONTINUOUS TRAINING	Aerobic exercising, at a moderate to high level, with no rests
19	Define the term COORDINATION	The ability to use two or more body parts together
20	What are DIURETICS?	Drugs that elevate the rate of bodily urine excretion

21	What is ERYTHROPOIETIN (EPO)?	A type of peptide hormone that increases the red blood cell count
22	Describe FARTLEK TRAINING	Training at different intensities on various terrains (speed play)
23	What are FAST TWITCH MUSCLE FIBRE?	Muscle fibres used in events requiring quick reactions and power (2a & 2x)
24	What does FITT stand for and how is it used?	Frequency, Intensity, Time, Type (used to increase the amount of work the body does, in order to achieve overload)
25	Where do I find HAEMOGLOBIN and what does it do?	Found in red blood cells, transports oxygen to body tissue
26	Define the term HEALTH	A state of complete mental, physical and social well-being, and not merely the absence of disease and infirmity
27	What is MUSCLE HYPERTOPHY?	When muscle increases in size because of exercise
28	Define the term INDIVIDUAL NEEDS/DIFFERENCES	Matching training to the requirements of an individual
29	What are INVOLUNTARY MUSCLES?	Work automatically, controlled by the involuntary nervous system
30	What is LACTIC ACID?	Chemical built up in the muscles during anaerobic exercise
31	What is a LIGAMENT?	Tough, rounded, elastic fibre attaching bone to bone at a joint
32	How do you calculate MAXIMUM HEART RATE?	220 - Age
33	What are NARCOTIC ANALGESICS?	Drugs that can be used to reduce the feeling of pain
34	Define OPTIMUM WEIGHT	Ideal weight for a person, giving them the best chance of success in an activity
35	Define OXYGEN DEBT	The amount of oxygen consumed during recovery above that which would have ordinarily been consumed in the same time at rest (this results in a shortfall in the oxygen available)
36	What are PEPTIDE HORMONES?	Drugs that cause the production of other hormones
37	Define REACTION TIME	The time between the presentation of a stimulus and the onset of a movement
38	Define RECOVERY RATE	The time it takes for the heart to return to resting rate after exercise
39	Define the term SIMPLE/CLOSED FRACTURE	Break of the bone when the skin is not broken
40	What are SLOW TWITCH MUSCLE FIBRE?	Muscle fibres required in endurance events (Type 1)
41	What is a SPRAIN?	Injury involving joints and ligaments

42	What are STIMULANTS?	Drugs that have an effect on the central nervous system, ie increased mental and/or physical alertness
43	What is a STRAIN?	Pulled muscle as a result of overstretching
44	Define a STROKE VOLUME	The volume of blood pumped out of the heart by each ventricle during one contraction
45	What are the SUPERIOR VENA CAVA?	Blood vessel transporting deoxygenated blood back to the heart
46	Define TARGET/TRAINING ZONE	The range within which an individual needs to work for aerobic training to take place (60 - 80% MHR)
47	What are TENDONS?	Strong, non-elastic tissue attaching bone to muscle
48	Define TIDAL VOLUME	Amount of air breathed in or out during normal breathing
49	Define VITAL CAPACITY	Amount of air that can be breathed out, after a deep breath in
50	Define VO2 MAXIMUM	The maximum amount of oxygen used in one minute per kilogram of body weight

Physic Paper 1

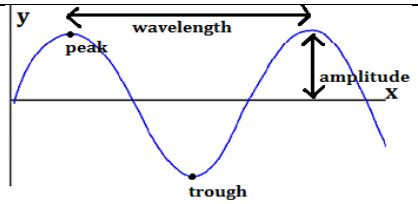
	Questions	Answers
	ENERGY	
1	Write the equation used to calculate the kinetic energy of a moving object.	0.5 × mass × (speed)^2
2	Write the equation used to calculate the amount of elastic potential energy stored in a stretched spring.	0.5 × spring constant × (extension)^2
3	What is the unit for kinetic energy, gravitational potential energy and elastic potential energy?	Joules, J
4	Write the equation used to calculate the amount of gravitational potential energy gained by an object raised above ground level.	mass × gravitational field strength × height
5	What is the rate at which energy is transferred or work is done?	Power
6	Write two equations to calculate power.	Power = $\frac{energy\ transferred}{time}$ or $\frac{Work\ done}{time}$
7	What is the unit for Power?	Watts
8	What can be transferred usefully, stored or dissipated, but cannot be created or destroyed?	Energy
9	Write the equation for calculating the energy efficiency of any energy transfer.	$\frac{useful\ output\ energy\ transfer}{total\ input\ energy\ transfer}$
10	What are the three main forms of fossil fuels used as energy resources?	Coal, oil, natural gas
11	State the three principle uses of energy resources.	Transport, electricity generation and heating
12	Name seven renewable energy resources available for use on Earth.	Biofuel, wind, hydro-electricity, geothermal, the tides, the Sun, and water waves
13	What is a renewable resource?	One that can be replenished as it is used
	ELECTRICITY	
14	State what the following symbols show: 	

15	What does the graph look like for the resistance of a filament bulb?	
16	What does the graph look like for the resistance of a diode?	
17	What is the equation to calculate current, potential difference or resistance?	Potential difference = current × resistance
18	What is the unit for resistance?	Ohms, Ω
19	What happens to the resistance of a thermistor as the temperature increases?	Decreases
20	What happens to the resistance of an LDR as the light intensity increases?	Decreases
21	Describe the current in a series circuit.	It is the same through each component.
22	Describe the potential difference in a series circuit.	It is shared between components
23	Describe resistance in a parallel circuit.	It is less than the resistance of the smallest individual resistor
24	Describe domestic mains electricity supply in the UK.	It is ac (alternating current), has a frequency of 50 Hz and is about 230V
25	What colour is the insulation on wires in a plug (Live, neutral, earth)	Live- Brown, Neutral- Blue, Earth- Green/yellow
26	Write two equations for calculating power transfer in an electric circuit.	Power = potential difference × current or Power = (current)2 × resistance
27	What does the amount of energy an appliance transfers depend on?	How long the appliance is switched on for and the power of the appliance
28	What are the two equations for calculating the amount of energy transferred by electrical work?	Energy transferred = power × time or Energy transferred = charge flow × potential difference
29	How is electrical power transferred from power stations to consumers?	The national grid
	PARTICLE MODEL OF MATTER	
30	What is the equation for calculating density?	Mass/ Volume
31	True or False: changes of state are physical changes?	True
32	What is the total kinetic and potential energy of all particles that make up a system known as?	Internal energy
33	Which three factors affect the increase in temperature of a substance?	Its mass, the type of material and the energy input

34	What is the amount of energy required to raise the temperature of a substance by 1°C known as?	Specific heat capacity
35	What is the energy needed for one Kg of a substance to change state without a change in temperature known as?	Specific latent heat
36	Describe the motion of molecules of a gas.	Constant random motion
37	What happens to the pressure exerted by a gas, held at constant volume, when the temperature is increased?	It increases
	ATOMIC STRUCTURE	
38	What happens to an atom when it has an outer electron removed (e.g. by ionising radiation)	It forms a positive ion
39	What is the name given to the process when radiation is released as an unstable nucleus becomes more stable?	Radioactive decay
40	What is radioactivity measured in?	Bequerels (Bq)
41	What is an alpha particle?	It consists of two neutrons and two protons – a helium nucleus
42	What is a beta particle?	A high speed electron
43	What change takes place in a nucleus when a beta particle is emitted?	A neutron turns into a proton
44	What electromagnetic radiation can be released from the nucleus of a radioactive sample?	Gamma rays
45	How is an alpha particle represented in nuclear equations?	$^{4}_{2}He$
46	How is a beta particle represented in nuclear equations?	$^{0}_{-1}e$
47	What is the time taken for the number of nuclei of an isotope in a sample to halve known as?	Half life
48	What is the presence of radioactive materials on or in other objects known as?	Radioactive contamination
49	What is the process of exposing an object to nuclear radiation without causing it to become radioactive known as?	Irradiation

Physics Paper 2

	Questions	Answers
	FORCES	
1	A quantity that only has magnitude is a …	Scalar
2	A quantity with magnitude and direction is a …	Vector
3	Write the equation used to calculate the weight if an object.	weight = mass × gravitational field strength
4	Write the equation to calculate the force applied to a spring.	force = spring constant × extension
5	Write the equation to calculate the elastic potential energy of a spring.	Elastic potential energy = 0.5 × spring constant × extension²
6	Write the equation to calculate the moment (turning force) of an object. **(TRIPLE ONLY)**	moment of a force = force ×distance
7	Why are levers used? **(TRIPLE ONLY)**	Levers can be used to exert a force that is greater than the effort
8	What is the equation to calculate the pressure on the surface of an object.	$\text{pressure} = \frac{\text{force normal to a surface}}{\text{area of that surface}}$ $\left[p = \frac{F}{A}\right]$
9	Write down the equation to calculate the pressure in a column of liquid. **(TRIPLE ONLY)**	Pressure = height of the column × density of the liquid × gravitational field strength
10	Write down the equation used to calculate speed.	distance travelled = speed × time
11	On a distance-time graph, if the line is horizontal what is the object doing?	It is stationary.
12	On a distance-time graph, if the line is a straight line sloping upwards, how is the object behaving?	It is travelling at a steady speed.
13	What is the equation to calculate the acceleration of an object?	$\text{acceleration} = \frac{\text{change in velocity}}{\text{time taken}}$ $\left[a = \frac{\Delta v}{t}\right]$
14	What does a positive gradient on the velocity-time graph represent?	Acceleration
15	What does the area under the line of a velocity-time graph represent?	The distance travelled
16	Write down the equation to calculate the resultant force of an object.	Resultant force = mass × acceleration
17	The unit of force is the …	Newton, N
18	What is an objects centre of mass?	It is the point where it's mass can be thought of as concentrated.
19	Write down the equation needed to calculate the momentum of an object. (HT)	Momentum= mass × velocity
	WAVES	
20	What are sound waves?	Vibrations that travel through a medium (Substance)

21	Why can't sound waves travel through a vacuum?	There are no particles to transfer the energy
22	Write down the equation to calculate the period of a wave?	$\text{acceleration} = \frac{\text{change in velocity}}{\text{time taken}}$ $\left[a = \frac{\Delta v}{t} \right]$
23	Write down the equation used to calculate the speed of a wave.	wave speed = frequency × wavelength
24	What do waves transfer?	Energy and information
25	What is a transverse wave?	Transverse waves oscillate perpendicular (90 degrees) to the direction of the energy transfer of the wave. E.g. ripples on the surface of the water or electromagnetic waves
26	What is a longitudinal wave?	Longitudinal waves oscillate parallel to the direction of the energy transfer (same direction). E.g. sound waves.
27	What is the frequency of a wave?	The number of waves that pass a point in 1 second.
28	What do mechanical waves need to travel?	A medium
29	Draw and label a wave	
30	The maximum displacement of a point in the wave from its undisturbed position such as the height of the wave crest from the position at rest is called the …	Amplitude
31	The distance from one point on a wave to the same point on the next wave is the …	Wavelength
32	What is the order of the electromagnetic spectrum?	radio waves, microwaves, infrared radiation, visible light, ultraviolet, x-rays, gamma rays
33	What is infrared radiation used for?	Carrying signals from remote control handsets and inside optical fibres
34	What are microwaves used for?	To carry satellite TV programmes and mobile phone calls.
35	What are x-rays used for?	To make images of internal body parts, and destroying tumours near the surface of the body
36	What are gamma rays used for?	Destroying tumours and sterilising hospital equipment.
	MAGNETISM	
37	What are the ends of a magnet called?	Poles

38	When magnetism is created in an unmagnetised magnetic material when that material is place in the magnetic field it is called …	Induced magnetism
39	Why is steel used to make permanent magnets?	Steel does not lose its magnetism as easily as iron.
40	A solenoid that has an iron core. It consists of an insulated wire wrapped around a soft iron core.	An electromagnet
41	What are electromagnets used for?	Electromagnets are used in scrapyard cranes, circuit breaker, electric bells and relays
	SPACE (TRIPLE ONLY)	
42	Which force pulled dust and gas together to form our solar system?	Gravity
43	What is a protostar?	A concentration of gas and dust that becomes hot enough to cause nuclear fusion.
44	Gravitational forces acting inwards balance the forces of nuclear fusion energy in the core acting outwards causing a star to be …	Stable
45	Why do stars eventually become unstable?	They have no more hydrogen nuclei that they can fuse together.
46	What is the life cycle of an average sized star like our sun?	Protostar → main-sequence star → red giant → white dwarf → black dwarf
47	What is the life cycle for stars much more massive than the Sun – life sequence:	Protostar → main-sequence star → red supergiant → supernova → neutron star (or black hole if enough mass).
48	The explosion of a red supergiant after it collapses is called a …	Supernova
49	Distant galaxies moving away from us is evidence that the universe is …	Expanding
50	When wavelengths of light are stretches as distant galaxies are moving away from us this causes …	Red Shift

Religious Studies

	Questions	Answers
	Christian Beliefs and Practices	
1	What does omnipotent mean? What does 'just' mean?	All powerful. Fair.
2	Why don't all Christians believe in hell?	They don't believe a loving God would send someone to eternal torment and suffering.
3	What is salvation?	The belief that that because Jesus sacrificed his life everyone can now have a relationship with God, and everyone has the opportunity to go to heaven.
4	What is the difference between infant and Believers Baptism?	Infant – babies, water poured over head, parents make promises. Believer – older people, full immersion, make own promises.
5	What is the problem of evil and suffering?	If God is all loving and fair then whey does he allow people to suffer.
6	Who believes in purgatory?	Catholics.
7	What is atonement?	The idea of confessing and making amends for what you have done wrong. Saying sorry, feeling sorry, and doing something to put it right.
8	What is the Eucharist? What is the difference between transubstantiation and consubstantiation?	Holy Communion – Bread and wine, remembering the Last Supper and Jesus' sacrifice. Transubstantiation – bread and wine actually become the body and blood of Christ. Consubstantiation – bread and wine symbolise the body and blood of Christ.
9	What do Christians say about the role of the Trinity in Creation?	God the Father was the creator. The Word (Jesus) and the Holy Spirit were present at creation.
10	What does incarnation mean?	Taking on human form, God became God the Son (Jesus).
11	Name the four types of worship.	Liturgical, non-liturgical, informal, private.
12	Why do Christians visit Lourdes and Iona?	Lourdes – Mary appeared in a vision, water ahs healing properties, miracles. Iona – St Columbas established a religious group in the 6th century. Quiet, peaceful.
13	What is resurrection?	Rising from the dead.
14	What is the crucifixion?	Where Jesus was killed on the cross on Good Friday.
15	What is a sacrament?	Rites and rituals through which the believer receives a special gift of grace. Sacrament are 'outward signs' of 'inward grace'.
16	How and why do Christians celebrate Easter and Christmas?	Christmas – Jesus' birth. Attend church, carols, presents, family time. Easter- Jesus' death and resurrection. Attend church, eggs (new life).
17	What is judgement? Link to the Sheep and the Goats	Making a decision about something. God will make a judgement on how someone has lived their life. Sheep – good, heaven. Goats – bad, hell.
18	What is the ascension?	When Jesus went up to heaven 40 days after his resurrection.

19	Who gave Christians the Lord's Prayers?	Jesus.
	Hindu beliefs and practices	
20	What is the difference between nirguna and saguna Brahman?	Nirguna – Supreme Being as a spiritual presence only. Saguna – Supreme Being shown in form.
21	What are the four aims of life?	Dharma, Artha, Kama, Moksha.
22	What is the difference between Vaishnavism and Shaivism?	Vaishnavism – worshipper of Vishnu. Shaivism – worshipper of Shiva.
23	What are bhajan/kirtan?	Devotional hymns/songs to God.
24	Give 5 points about each of the Trimurti.	Brahma – Creator, four heads, responsible for whole world, lotus flower, Saraswati. Vishnu – Preserver, avatars, enter the heart of every living being, represents the soul of the whole universe, gave birth to Brahma. Shiva – Destroyer, recreation after destruction, Parvati, complex god, Nataraja.
25	What is the difference between vamashrama dharma and Santana dharma?	Varnashrama dhama – a person's responsibility regarding class (varna) and stage of life (askrama). Sanatana Dharma – eternal truth, for all Hindus all the time.
26	What is havan?	Fire Sacrifice, performed on special occasion to Agni. Prayers are said.
27	What are Japas?	Chants or prayers to God, repeated words or sounds. Also known as mantras.
28	Who and what are avatars?	Physical forms of Vishnu. Matsya, Kurma, Varaha, Narasimha, Vamana, Parashurama, Rama, Krishna, Buddha, Kalki.
29	How is divali celebrated?	Firecrackers, get financial records in order, houses and temples are spring cleaned, new clothes, gifts, lamps are lit.
30	What is arti?	Offering of light to a deity through a murti.
31	What are the four paths of yoga?	Karma, Jnana, Astanga, Bhakti.
32	What is the triguna?	The three qualities of gunas – goodness, passion and ignorance.
33	How is Holi celebrated?	People wear old clothes and smother each other in brightly coloured powders. Fun. Bonfires.
34	What is puja?	Paying respect to a deity as an honoured guest. Worship in the home or temple.
35	What is Kumbh Mela?	The site of the world's largest pilgrimage.
36	What are the 4 ages?	The Cycle of the 4 ages – 4 long ages called yugas that constantly rotate. Gold, silver, copper, Iron. Kalki will appear at the end. Then it will start again.
37	What is pilgrimage?	A religious duty. Journey to a holy place.
38	What is darshan?	Viewing with respect a holy image and receiving a divine blessing.
39	What is samsara? How does is link with Karma?	Samsara – a continuous cycle of birth, death and rebirth. Karma – consequences of actions.

	Themes – Religion and life, and Religion. Peace and conflict	
40	Which book of the bible contains the story of creation?	Genesis, Old Testament.
41	Is abortion legal or illegal in the UK?	Abortion is legal in the UK as long as two doctors agree to it.
42	What is peace? What is justice? What is reconciliation?	Peace – happiness and tranquillity. Justice – Fairness. Reconciliation - effort to rebuild a relationship.
43	What is Holy War? Do Christians agree with Holy war?	Holy war – fighting for a religious cause. Modern Christians don't really agree with Holy War because Jesus said violence is never justified.
44	What is stewardship? What is dominion?	Stewardship – protection and care. Dominion – power and authority.
45	What does euthanasia mean? Do Christians agree or disagree with it?	Euthanasia means 'good or gentle death. Some Christians agree with it and some don't.
46	What do Christians think about protest? What is terrorism?	Protest is a fundamental right. Terrorism is a serious form of violet protest.
47	What is a pacifist?	Pacifist – do not take part in wars or any violence.
48	What do Christians believe about pollution?	Pollution is a problem, Christians want to protect the earth.
49	What do Christians believe about life after death?	Christians believe in life after death. They believe God will judge them. People will then go to heaven or hell.
50	What are the three main reasons for war?	Greed – to gain land or resources. Self defence – defend yourself or others. Retaliation – revenge against another country.
51	Who would be considered a victim of war?	Armed forces, their families, civilians in a war zone, refugees.
52	What do Christians believeabout the use of animals?	That animals were created by God for humans to use, and to look after.
53	What are three types of weapons of mass destruction?	Nuclear weapons, biological weapons and chemical weapons.
54	Do religion and science agree or disagree about the origins of human life?	Religions and science have different views on the origins of life. People believe both theories.
55	What are the six clauses of the Just War Theory?	Just cause, proper legal authority, just intention, last resort, chance of success, proportional force.
	Themes – Religion, crime and punishment and Religion, human rights and justice	
56	What is punishment?	A punishment is given when a law is broken.
57	What are the three types of punishment?	Prison, corporal, and community service.
58	What is social justice?	Social justice – society treats all people fairly. Protects all human rights.
59	Where do most people in the world who are in poverty live?	There are people in poverty all over the world but most live in LEDCs.

60	Do Christians believe crime can ever be justified? What are the main reasons for crime?	Christians do not believe crimes can be justified. The main reasons for crime are; poverty, upbringing, mental illness, addiction, greed, hate and opposition to an unjust law.
61	What do Christians believe about forgiveness?	It is really important. People should be forgiven.
62	What do Christians believe about equality? What is prejudice? What is discrimination?	Christians believe in equality. Prejudice – holding biased options. Discrimination – actions which result from prejudice.
63	What is exploitation? What is people trafficking?	Exploitation – misuse of power of money. People trafficking – illegal movement of people – forced labour, sexual exploitation.
64	How do Christians feel about law breakers?	Compassion.
65	What is the death penalty?	The death penalty is a form of punishment where the criminal is put to death.
66	What do Christians think about other religions?	Christians believe in freedom of religion.
67	Why do Christians give help and money to the poor?	Christians give to the poor to fulfil the teaching 'love your neighbour'.
68	What are the three main aims of punishment?	Retribution, deterrence, and reformation.
69	What do Christians think about racial prejudice and discrimination?	Christians are against all forms of prejudice and discrimination.
70	What do Christians believe about suffering?	They believe they should always help those who are suffering. They should not ignore suffering.
71	Is wealth good or bad?	Wealth is a blessing from God. But is can be associated with greed and selfishness.