Al Ain English Speaking School

Sixth Form – Mock Examination Topic List

February 2016

Sixth Form Mock Examinations Topic List 2016

Biology

Subject	Biology – Year 12
Papers	Paper 1 MCQ Paper 2 Written Theory Paper 3 Practical Paper

Unit	Topics Covered	Study Strategies
Cell ultrastructure and microscopes	Using graticules and micrometers, resolution and magnification, calculations of cell size, use of microscopes for practical purposes, cellular ultrastruture, function and structure of all organelles, features of eukaryotes vs prokaryotes, bacterial and viral structure. **Major overlap with practical paper topics**	**Theory** Organised notes are essential and must be reviewed consistently. Summary notes, flash cards, flow diagrams, picture review, spider web notes, post-it's all help with revision of main points. Understanding mathematical calculation methods are important. Review of past assessment papers and highlighting areas of weakness to be reviewed along with glossary of question terminology in the syllabus. **Practical** It cannot be stressed enough that the methods for the different Biology practical activities be fully learned and understood. All practical and assessed practical papers must be reviewed, ensure that you can draw a correct results table for your data, along with sources of error attached to methods, and giving suggestions for improvements. Biological drawings must be practiced. **Teacher assistance** Drop in sessions Tuesday after school, ask in advance for help and try to avoid last minute cramming.
Biological molecules, chemical tests and enzymes	Carbohydrates – alpha and beta glucose, fructose, maltose, sucrose, glycogen, starch (amylose and amylopectin), cellulose. Know the structures, be able to analyse and relate it to function. All chemical tests must be known and fully understood, reagents and positive test results for each test. Mode of action of enzymes, active site, induced fit model, and factors (temp. conc. of substrate and enzyme, pH, inhibitors) that affect enzyme action must be fully understood. **Major overlap with practical paper topics.**	
Cell membranes and transport	Fluid mosaic model of membranes, functions of components, and cell signalling. Transport process include osmosis, diffusion, active transport, facilitated diffusion, endo- and exocytosis. Diffusion using visking tubing and agar, effect of temperature, concentration and surface area on diffusion rates. **Major overlap with practical paper topics.**	
Mitotic cell cycle, nucleic acids and protein synthesis	Structure of chromosomes, importance of mitosis, cell cycle, function of telomeres, behaviour of chromosomes during stages of mitosis, root squash slides, structure of nucleotides, DNA and RNA, semi-conservative replication of DNA, protein synthesis (transcription and translation)	
Structure of plant tissues, transport in plants	Drawing plan diagrams and prepared slides of plant tissues. Xylem and phloem structure. **Major overlap with practical paper topics.** Pathways and mechanisms of water and mineral ion transport in plants, transpiration rates and practical on factors that affect rate of transpiration (temperature, light intensity, humidity, wind movement, availability of water), xerophyte and hydrophyte plants, sucrose translocation and mass flow.	

Subject	Biology – Year 13
Papers	Paper 4 – Written Theory Paper 5 – Practical Planning

Unit	Topics Covered	Study Strategies
Variation, natural and artificial selection, evolution	Continuous and discontinuous variation, genetic variation and selection link, t-test calculations, struggle for existence, environment factors that affect selection, stabilising, disruptive and directional forces of natural selection, Hardy–Weinberg principle, selective breeding for milk yield, disease resistance in wheat, theory of evolution, pre-zygotic and post-zygotic isolating mechanisms, speciation and extinctions	**Practical** It cannot be stressed enough that the methods for the different Biology practical activities be fully learned and understood. All practical and assessed practical papers must be reviewed, along with sources of error attached to methods, and giving suggestions for improvements. Review practical work from year 12 **Theory** Statistical calculations for all of the tests need to be understood and applied to unknown situations. Organised notes are essential and must be reviewed consistently. Summary notes, flash cards, flow diagrams, picture review, spider web notes, post-it's all help with revision of main points. Review of past assessment papers and highlighting areas of weakness to be reviewed along with glossary of question terminology in the syllabus. **Always ask if unsure, drop-in session Tuesday after school**
Biodiversity, classification and conservation	3 levels of biodiversity, random sampling of biological species in ecological survey, Spearman's rank correlation, Simpson's Index of Diversity (*D* and Pearson's linear Correlation calculation, taxonomic hierarchy, Archaea, Bacteria and Eukarya, Protoctista, Fungi, Plantae and Animalia features, why viruses are not included, threats to the biodiversity, methods of protecting endangered species, methods of assisted reproduction of endangered species, roles of non-governmental organisations	
Inheritance, roles of gene in phenotype, gene control	homologous pairs of chromosomes, haploid and diploid, meiosis in gametogenesis, behaviour of chromosomes in meiosis, crossing over and random assortment leading to variation, monohybrid and dihybrid crosses, test crosses, chi square test, gene mutations, relationship of genes with enzymes, albinism, sickle cell anaemia, haemophilia and Huntington's disease, structural and regulatory genes, *lac* operon, transcription factors and gibberellins	
Gene technology	recombinant DNA, extraction of genes, polymerase chain reaction (PCR), gel electrophoresis, properties of plasmids, adding promoter sequences and use of genes for florescence, restriction endonucleases and microarrays, bioinformatics, producing human proteins by gene technology, genetic screening and gene therapy, social and ethical considerations, use of PCR and DNA testing in forensic medicine, genetic engineering to improve crop yield, herbicide resistance and insect resistance, ethical and social implications of gene technology	
Energy and respiration	Need for energy, ATP, glycolysis, link reaction, Krebs cycle, oxidative phosphorylation, energy values, respiratory quotients, respiration investigation using respirometers, structure and function of mitochondria, growth of rice under water, differences between anaerobic and aerobic respiration	
Control and coordination in mammals	Nervous and endocrine systems, sensory and receptor neurons, action potential, myelin sheets, synapses, neuromuscular junctions, striated muscle, contraction, hormonal control of menstrual cycle	

Chemistry

Subject	Chemistry – Year 12
Papers	Paper 1 MCQ Paper 2 Written Theory Paper 3 Practical Paper

Unit	Topics Covered	Study Strategies
Atoms, Stoichiometry, Molecules	Relative masses of atoms and molecules The mole, the Avogadro constant The determination of relative atomic masses, A_r , and relative molecular masses, M_r , from mass spectra The calculation of empirical and molecular formulae Reacting masses and volumes (of solutions and gases)	**Practicals** Obviously, you can't revise for practical exams at home. But you can look over common scientific methods and techniques from your practical's completed to date – be able to draw concise tables and perform chemical calculations. **Theory** Good notes are invaluable and they act as a form of 'external' memory, a kind of extension to the memory capacity of your mind – enabling you to have ready access to a far wider range of knowledge. Therefore, review all topic notes thoroughly, highlight any areas further assistance is needed. Errors made in theoretical assessments should be reviewed. **Teacher Assistance** On review of practical and theoretical topics – ensure to seek teacher guidance for any concepts still unclear before mock
Atomic Structure	The nucleus of the atom: neutrons and protons, isotopes, proton and nucleon numbers Electrons: electronic energy levels, ionisation energies, atomic orbitals, extranuclear structure	
Chemical Bonding	Ionic (electrovalent) bonding Covalent bonding and coordinate (dative covalent) bonding (i) The shapes of simple molecules (ii) Bond energies, bond lengths and bond polarities Intermolecular forces, including hydrogen bonding Metallic bonding Bonding and physical properties	
States of Matter	The gaseous state: (i) Ideal gas behaviour and deviations from it (ii) $pV = nRT$ and its use in determining a value for M_r The liquid state The kinetic concept of the liquid state and simple kinetic-molecular descriptions of changes of state The solid state Lattice structures	
Chemical Energetics	Enthalpy changes: ΔH of formation, combustion, hydration, solution, neutralisation and atomisation; bond energy; electron affinity Hess' Law and calculations	
Electrochemistry	Redox processes: electron transfer and changes in oxidation number (oxidation state) Industrial uses of electrolysis	
Equilibria	Chemical equilibria: reversible reactions; dynamic equilibrium (i) Factors affecting chemical equilibria (ii) Equilibrium constants (iii) The Haber process; the Contact process Brønsted-Lowry theory of acids and bases	
Reaction Kinetics	a) explain and use the terms: rate of reaction, activation energy, catalysis (b) *explain qualitatively, in terms of collisions, the effect of concentration changes on the rate of a reaction (c) *show understanding, including reference to the Boltzmann distribution, of what is meant by the term activation energy	

	(d) *explain qualitatively, in terms both of the Boltzmann distribution and of collision frequency, the effect of temperature change on the rate of a reaction (e)* (i) explain that, in the presence of a catalyst, a reaction has a different mechanism, i.e. one of lower activation energy (ii) interpret this catalytic effect in terms of the Boltzmann distribution (f) describe enzymes as biological catalysts (proteins) which may have specific activity	exams – make an appointment to see Miss Harte or drop into after school chemistry on Thursdays.
Inorganic Chemistry Period 3 and Group 2	(a) *describe qualitatively (and indicate the periodicity in) the variations in atomic radius, ionic radius, melting point and electrical conductivity of the elements (see the Data Booklet) (b) explain qualitatively the variation in atomic radius and ionic radius (c) interpret the variation in melting point and in electrical conductivity in terms of the presence of simple molecular, giant molecular or metallic bonding in the elements (d) explain the variation in first ionisation energy (e) describe the reactions, if any, of the elements with oxygen (to give Na2O, MgO, Al 2O3, P4O10, SO2, SO3), chlorine (to give NaCl , MgCl 2,Al 2Cl 6, SiCl 4, PCl 5) and water (Na and Mg only) (f) state and explain the variation in oxidation number of the oxides and chlorides in terms of their valence shell electrons (g) describe the reactions of the oxides with water [treatment of peroxides and superoxides is not required] (h) describe and explain the acid/base behaviour of oxides and hydroxides including, where relevant, amphoteric behaviour in reaction with sodium hydroxide (only) and acids (i) describe and explain the reactions of the chlorides with water (j) interpret the variations and trends in (f), (g), (h), and (i) in terms of bonding and electronegativity (k) suggest the types of chemical bonding present in chlorides and oxides from observations of their chemical and physical properties In addition, candidates should be able to: (l) predict the characteristic properties of an element in a given group by using knowledge of chemical periodicity (m) deduce the nature, possible position in the Periodic Table, and identity of unknown elements from given information about physical and chemical properties (a) describe the reactions of the elements with oxygen, water and dilute acids (b) describe the behaviour of the oxides, hydroxides and carbonates with water and with dilute acids (c) describe the thermal decomposition of the nitrates and carbonates (d) interpret, and make predictions from, the trends in physical and chemical properties of the elements and their compounds (e) explain the use of magnesium oxide as a refractory lining material (f) describe and explain the use of lime in agriculture (i) explain the use of chlorine in water purification (j) state the industrial importance and environmental significance of the halogens and their compounds (e.g. for bleaches, PVC, halogenated hydrocarbons as solvents, refrigerants and in aerosols)	

Subject	Chemistry – Year 13
Papers	Paper 4 – Written Theory Paper 5 – Practical Planning

Unit - Physical	Topics Covered	Study Strategies
Chemical Energetics	Lattice energy Hess' Law, including Born- Haber cycles	**Practicals** Obviously, you can't revise for practical exams at home. But you can look over common scientific methods and techniques from your practical's completed to date – be able to draw concise tables and perform chemical calculations. **Theory** Good notes are invaluable and they act as a form of 'external' memory, a kind of extension to the memory capacity of your mind – enabling you to have ready access to a far wider range of knowledge. Therefore, review all topic notes thoroughly, highlight any areas further assistance is needed. Errors made in theoretical assessments should be reviewed. **Teacher Assistance** On review of practical and theoretical topics – ensure to seek teacher guidance for any concepts still unclear before mock exams.
Electrochemistry	Electrode potentials (i) Standard electrode (redox) potentials, E ; the redox series (ii) Standard cell potentials, *E* , and their uses (iii) Batteries and fuel cells Electrolysis (i) Factors affecting the amount of substance liberated during electrolysis (ii) The Faraday constant: the Avogadro constant: their relationship	
Equilibria	Ionic equilibria (i) Brønsted-Lowry theory of acids and bases (ii) Acid dissociation constants, *K*a and the use of p*K*a (iii) The ionic product of water, *K*w (iv) pH: choice of pH indicators (v) Buffer solutions (vi) Solubility product; the common ion effect	
Reaction Kinetics	Simple rate equations; orders of reaction; rate constants	
Transition Metal Elements	General physical and characteristic chemical properties of the first set of transition elements, titanium to copper Colour of complexes	
Benzene and Chlorobenzene	Arenes (exemplified by benzene and methylbenzene) (i) Influence of delocalised π electrons on structure and properties (ii) Substitution reactions with electrophiles (iii) Oxidation of side-chain	
Phenols	The tri-iodomethane test Phenol (i) Its acidity; reaction with sodium (ii) Nitration of, and bromination of, the aromatic ring	
Acyl Clorides	Acyl chlorides (exemplified by ethanoyl chloride) (i) Ease of hydrolysis compared with alkyl and aryl chlorides (ii) Reaction with alcohols, phenols and primary amines	
Nitrogen compounds	Primary amines (exemplified by ethylamine and phenylamine) (i) Formation (ii) Salt formation (iii) Other reactions of phenylamine Amides (exemplified by ethanamide) (i) Formation from acyl chlorides (ii) Hydrolysis Amino acids (exemplified by aminoethanoic acid) (i) Acid and base properties (ii) Zwitterion formation Proteins (i) Structure, based on the peptide linkage (ii) Hydrolysis of proteins	
Polymerisation	Addition and Condensation polymerisation Polymer chains/repeat units and monomer identification	

Physics

Subject	Y 12 Physics
Papers	Paper 1: Multiple choice Paper 2: AS Level Structured Questions Paper 3: Advanced Practical Skills

Unit	Topics Covered	Study Strategies
Physical Quantities and Units	• Physical quantities • SI Units • Scalars and vectors	General Study tips: 1. Review notes against syllabus outcomes to ensure the notes address the outcomes. 2. Produce a summary card of the key concepts and equations from memory 3. Review the questions that you did from the textbook that you did not answer correctly. 4. Reattempt the questions from the extended homework and tests that you scored less than half the marks in. 5. Use your supplementary problem solving booklets to solve similar questions to build your problem solving insight. 6. Download/ print 3 sets of past papers (P1 and P2). Use the first 2 sets to follow up on steps 4 and 5 above. Remember to keep track of the time when solving past paper questions (especially for the multiple choice) 7. As you approach the end of your studies use the last set of paper 1 and 2 as a personal mock exam. Practical Exam 1. Read through the Cambridge practical booklet you received at the start of the year to ensure you are familiar with the success criteria for paper 3. 2. Look through the practical tests you have done in the first and second term to identify the errors you made. Make certain you are clear as to why you did not achieve a particular mark in the test. In summary: If at any point you find you have a question you cannot solve/ find the answer to make sure you ask somebody. You can ask a fellow Y12 Physics student, a Y13 Physics student, you can post your question on the "Betta Team" Physics Forum or you can ask Mr Abass
Measurement techniques	• Making Measurements • Errors and uncertainties	
Kinematics	• Motion graphs • Equations of uniformly accelerated motion	
Dynamics	• Inertia • Newton's laws of motion • Linear momentum and its conservation • Accelerated motion in force fields • Conservation of linear momentum	
Forces, density and pressure	• Types of force (including electric forces) • Turning forces • Forces in equilibrium • Density and pressure	
Work, energy and power	• Energy transfer and conservation of energy • Work and efficiency • Potential energy and kinetic energy • Power	
Deformation of solids	• Deformation and Hooke's Law • Stress, Strain • Young's Modulus • Elastic and Plastic deformation	

Subject	Y 13 Physics
Papers	Paper 4: A Level Structured Questions Paper 5: Planning Analysis and Evaluation

Unit	Topics Covered	Study Strategies
Non-uniform Acceleration: Circular Motion	• Kinematics of uniform circular motion • Centripetal acceleration and Centripetal force	General Study tips: 8. Review notes against syllabus outcomes to ensure the notes address the outcomes. 9. Produce a summary card of the key concepts and equations from memory 10. Review the questions that you did from the textbook that you did not answer correctly. 11. Reattempt the questions from the extended homework and tests that you scored less than half the marks in. 12. Use your supplementary problem solving booklets to solve similar questions to build your problem solving insight. 13. Download/ print 3 sets of past papers (P4). Use the first 2 sets to follow up on steps 4 and 5 above. Remember to keep track of the time when solving past paper questions. 14. As you approach the end of your studies use the last paper 4 as a personal mock exam. Practical Exam 3. Read through the Cambridge practical booklet you received at the start of the year to ensure you are familiar with the success criteria for paper 5. 4. Look through the practical tests you have done in the first and second term to identify the errors you made. Make certain you are clear as to why you did not achieve a particular mark in the test. We will be solving practice papers during the build up to the mock exams. In summary: If at any point you find you have a question you cannot solve/ find the answer to make sure you ask somebody. You can ask a fellow Y13 Physics student, you can post your question on the "Physics" Forum or you can ask Mr Abass.
Non-uniform Acceleration: Simple Harmonic Motion/ Oscillations	• Simple harmonic motion • Energy in simple harmonic motion • Damped and forced oscillations: resonance • Production and diagnostic use of ultrasound	
Thermal Physics: Temperature	• Thermal equilibrium • Temperature scales Practical thermometers	
Thermal Physics: Thermal properties of materials	• The kinetic model of matter • Specific heat capacity and Specific latent heat • Internal energy and First law of thermodynamics	
Thermal Physics: Ideal gases	• Equation of state • Kinetic theory of gases • Kinetic energy of a molecule	
Force Fields: Gravitational Fields	• Gravitational field • Force between point masses • Field of a point mass • Field near to the surface of the Earth Gravitational potential	
Force Fields: Electric Fields	• Force between point charges • Electric field of a point charge, Electric potential	
Capacitance	• Capacitors and capacitance Energy stored in a capacitor	
Electronics	• The ideal operational amplifier • Operational amplifier circuits • Output devices • Sensing devices	

Subject	Physical Education – Year 12
Papers 1	PAPER 1

Unit	Topics Covered	Study Strategies
UNIT 1 PART A The Development of Active Leisure and Recreation	The Development of Active Leisure and Recreation: Requirements for Participation Contemporary Concerns Sedentary Lifestyles and Ageing	Theory Use notes that have been taken in class during lessons, the student unit guide book and text book. Useful resources also include the internet/sports and nutrition videos on you tube as long as you can deem them accurate. • Read through your notes, firstly expand your notes into formal answers explaining in detail what each area is and how/what it is impacted by. Practice standing up and talking to a 'pretend' audience discussing the whole topic and its areas – Remember 'discuss' means positives and negatives whilst explaining why things happen and the impact of this. • Once you can write and talk about an area limit your topic to a Q that you give yourself written or orally and answer just the Q. • After this you can make a spider diagram with UNIT 1 in the middle and all topic headings around the outside. Just reading the topic heading you should be able to talk/write and answer Questions without any prompting or additional notes/book/words/help. • Also use practice exam papers and Questions we have done in the lessons – look at what you did well in and where you need improvements. • In the long mark Q's of 6-12 marks – make sure you read it properly e.g. 'discuss' means giving both sides of the effects and from all areas. Normally the no.of marks means the no of points you should give as well as a reason/argument/fact.
UNIT 1 PART A	Healthy Lifestyles The Differences and Similarities between Health and Fitness The positive benefits to achieving health and/or fitness Nutrition and Weight management Food Pyramid Current Trends in Health The effects of Ageing and the Ageing process	
Unit 1 Effects of Exercise – Response and Adaptations of the Body System	Responses and Adaptations to: Muscular-Skeletal system Cardiovascular system Heart, Blood and Blood Pressure Respiratory System Circulatory Changes Mechanical process of Inspiration – breathing Neuro-muscular system	
UNIT 1 PART A Fitness and Training	Fitness and Training. Components of Physical and Skill Fitess Methods of Fitness Training Principles of Fitness Ageing Appropriateness of programmes to differing clients Fitness Assessments	

Drama

Subject	**Year 12 Drama and Theatre Studies**
Papers	**Unit 2: Theatre Text in Performance**

Unit	Topics Covered	Study Strategies
Unit 2: Section A	Performers offer one of the following: „ solo (monologue) „ Pair performance (duologue).	**Classwork** - Rehearsals in class - Drama teacher coaching - Peer assessment/feedback **Private Study/Homework** - Learning of lines, annotating script in private study/homework - Reading of whole play to gain context of monologue - Independent research for historical/social & political context **Additional Rehearsal Time** - Liaise with teacher to arrange additional rehearsal time outside of allocated class time. - Check availability of drama room to practice independently.
Unit 2: Section B	Performers work within a performance company led by a tutor.	

Music

Subject	Music
Papers	Paper 1: Listening (2 hrs) Paper 2: Complete and hand over compositions 1 and 2 Paper 3: Recording of full recital

Unit	Topics Covered	Study Strategies
Section A: The 'First Viennese School' 1770–1827 (35 marks)	Haydn Symphony no. 55 *(The Schoolmaster)*, Hob. 1: 55 Mozart Piano Concerto in G major, K453 Beethoven Symphony no. 5 in C minor, Op 67 Schubert Piano Quintet in A major, D.667 *(The Trout)*, 4th movement only	**Paper 3:** Recording of the full recital will be done on Tuesday February 16th, venue to be confirmed as we need a grand piano. Ensure you have a full run through with Ms Conte before the day of recording **Paper 2:** Complete and hand over compositions 1 and 2 Submission day Tuesday 8th fof March. Ensure a full revision before submission and hand in hard copies, no electronic submission will be accepted. **Paper 1 (Theory):** Review all the essays you have written. Make sure you are familiar with all the relevant vocabulary, use it when writing. Structure your essays better by paragraphs, keep the answers focused towards the question. **Teacher Assistance**: Schedule a revision session on Monday and/or Tuesday after school.
Section B: Love and Loss (35 marks)	Purcell Dido and Aeneas, (Act I excluding the overture; Act III from Dido's entrance) Verdi Otello, (Act I Scene 3; Act IV) Berlioz Symphonie Fantastique, (Movements II, III and IV)	
Section C: Contextual and Cultural Issues (30 marks)	Questions will be asked about the background to the composition, performance and reception of the prescribed works in Section A, and about musical or aesthetic issues relevant to Sections A and B.	

Mathematics

Subject	Mathematics – Year 12
Papers	Paper 1 (Pure Mathematics): 1hr 30 min Paper 6 (Statistics) 1: 50 min

Unit	Topics Covered	Study Strategies
Paper 1 Pure Maths		**Theory** A formula booklet will be given. See your past exam paper booklets for guidance on which formulae are supplied. But in order to finish in time it is really much better to memorise these formulae. Start with the notes in your summary booklet. See if you can do each of the examples in your summary booklet. Ensure that you learn all relevant theory. If you know the theory you can then work on applying it. Look over theory on www.examsolutions.net if you have trouble with some principles in maths. Ask a question on the whatsapp maths group. Errors made in theoretical assessments should be reviewed. Do past exam paper questions from the booklets to ensure that you are able to answer exam type questions. (I would start with the most recent exam papers in your booklet and work backwards.) **Teacher Assistance** On review of theoretical topics – ensure to seek teacher guidance for any concepts still unclear before mock exams – make an appointment to see Mrs Nel or Mr Dorward. Attend after school support group on Wednesdays.
Chapter 1: Coordinate geometry	• find the length, gradient and mid-point ,equation of a straight line gradients of parallel and perpendicular lines;• interpret and use linear equations,$y = mx + c$ and $y - y_1 = m(x - x_1)$; •use the relationship between points of intersection of graphs and solutions of equations (including line being tangent to a curve and a repeated root of an equation).	
Chapter 4 and 5: Quadratics, inequalities, functions and graphs	Completing the square and to locate the vertex of the graph or to sketch the graph;• find discriminant and use the discriminant to determine the number of real roots of the equation • solve quadratic equations, and linear and quadratic inequalities, in one unknown;• solve by substitution a pair of simultaneous equations of which one is linear and one is quadratic;	
Chapter 3: Functions and graphs	• understand the terms function, domain, range • identify the range of a given function • determine whether or not a given function is one-one, and find the inverse of a one-one function in simple cases;• illustrate in graphical terms the relation between a one-one function and its inverse.	
Chapter 6, 7, 11, 12, 15: Differentiation	• understand the idea of the gradient of a curve, and use the notations f'(x), f''(x),dy/dx etc • use the derivative of x^n and for composite functions using the *chain rule*;• apply differentiation to gradients, tangents and normals, increasing and decreasing functions and rates of change (including connected rates of change);• locate stationary points, and use information about stationary points in sketching graphs (the ability to distinguish between maximum points and minimum points is required thus find second derivative)	

Chapter 8 and 14: Sequences	• use the formulae for the *n*th term and for the sum of the first *n* terms to solve problems • use the condition for the convergence of a geometric progression, and the formula for the sum to infinity of a convergent geometric progression.	LEARN THESE FORMULAE THAT WERE GIVEN IN THE SUMMARY BOOKLET OFF BY HEART. It will ensure that you have more time to do the questions than to page through the booklet looking for the correct formula.
Chapter 13: Vectors (Done in weekend class.)	• use standard notations for vectors,• carry out calculations of vectors •use unit vectors, displacement vectors and position vectors;• calculate the magnitude of a vector and the scalar product of two vectors;• use the scalar product to determine the angle between two directions, solve problems on perpendicularity.	Use http://www.examsolutions.net/maths-revision/syllabuses/CIE/period-1/P1/module.php for vectors.
Chapter 18: Radians (Circular measure)	•use the formulae in solving problems concerning the arc length and sector area and segment of a circle.	LEARN THESE FORMULAE THAT WERE GIVEN IN THE SUMMARY BOOKLET OFF BY HEART. See Edexcel textbook.
Chapter 10 Trigonometry	•Simplify trig expressions •Solve trig equations •Sketch trig graphs/find equations	
Paper 6 Statistics		
Chapter 1, 2, 3	• discuss advantages and/or disadvantages of representations• construct and interpret stem-and-leaf diagrams, box-and-whisker plots, histograms and cumulative frequency graphs;• understand and use different measures of central tendency (mean, median, mode) and measures of spread/ variation range,interquartile range, standard deviation), e.g. in comparing and contrasting sets of data;• use a cumulative frequency graph to estimate the median value, the quartiles and the interquartile range of a set of data;• calculate the mean and standard deviation of a set of data (including grouped data) either from the data itself or from given totals such as Σx and Σx^2, or $\Sigma(x-a)$ and $\Sigma(x-a)^2$.	The theory of advantages and disadvantages of different averages and choices of representing data was handed out. There might be a question of 4 marks in a final on the theory. Memorise the formulae that are in the formula booklet because it takes too long to go and look for it. Time management of the paper is crucial because the students struggle to finish the papers for both pure and stats in the allocated time.
Chapter 4: Probability	• evaluate probabilities ;• understand the meaning of exclusive and independent events, and calculate and use conditional probabilities	
Chapter 5: Permutations and combinations	• evaluate probabilities • understand the meaning of exclusive and independent events, and calculate and use conditional probabilities in simple cases,	**If you do not understand this chapter you will have difficulty answer the whole paper successfully.** The online videoclips of examsolutions are good but don't forget the great clips by https://www.youtube.com/watch?v=aLbh7jE8xdE
Chapter 6, 8: Probability distribution and E(X) and Var(X)	• construct a probability distribution table relating to a given situation involving a discrete random variable variable *X*, and calculate E(*X*) and Var(*X*);	

Subject	Mathematics A Level – Year 13
Papers	Mechanics 1: 1 hour 15 minutes Pure Mathematics 3: 45 mins

Unit	Topics Covered	Study Strategies
Paper 4 Mechanics		**Theory** A formula booklet will be given. See your past exam paper booklets for guidance on which formulae are supplied. But in order to finish in time and to recognise how a problem may be solved, it is really much better to memorise these formulae. **When you are studying using past papers, it is essential that when you use a mark scheme to help find an answer that you understand the solution conceptually, not just mathematically. There's no point knowing all the maths if you don't know which bits to apply.** **Teacher Assistance** On review of theoretical topics – ensure to seek teacher guidance for any concepts still unclear before mock exams.
Chapter 1	**Velocity and Acceleration**	
Chapter 2	**Force and Motion**	
Chapter 3	**Vertical Motion** Chapters 1, 2 & 3 are all very similar and revolve around using the SUVAT equations and F=ma in various different situations.	
Chapter 4	**Resolving Forces** Chapters 4 and 10 are best studied together as these both consist of different techniques for resolving and balancing multiple forces.	
Chapter 5	**Friction** Combine with chapter 6	
Chapter 6	**Motion Due to Gravity** Chapters 5&6 are as above but add friction into the questions, which you calculate using $F_{lim}=\mu R$ and then add to the resisting force or subtract from the driving force.	
Chapter 7	**Newtons Third Law** Chapter 7 is the pulley chapter and is assessed nearly every year.	
Chapter 8	**Work, Energy and Power** See below.	
Chapter 9	**Potential Energy** Chapters 8&9 offer a different method of solving some of the questions from Chapters 1, 2, 3, 5 & 6 as well as providing new questions. Students tend to struggle	

	more with questions involving power than those just with work and energy. Make sure you have a good grasp on the concept of power.	
Chapter 10	**Force as a Vector Quantity** Chapters 4 and 10 are best studied together as these both consist of different techniques for resolving and balancing multiple forces.	
Chapter 11	**General Motion in a Straight Line**	Chapter 11 will pose no issues so long as you remember to differentiate going from displacement to velocity to acceleration and integrate going the other way.
Pure Mathematics 3		
Chapter 12	**Vectors-Lines in 2D and 3D**	
Chapter 13	**Vectors-Planes in 3D**	Chapter 12 and 13 are stand-alone chapters and don't tie into any others. If you are aiming for a C or B and are struggling with vectors, work on picking up the easier marks and don't panic about the very difficult stuff.
Chapter 14	**The Binomial Expansion**	It's using a formula that's given in the formula sheet. Practise this, you will need these marks.
Chapter 15	**Rational Functions**	Very important Chapter. Spend a lot of time on this.

Arabic 1 and 2

Subject	Arabic 1
Papers	1 paper

Unit	Topics Covered	Study Strategies
Unit 1	Page 11……68	Re-read all the units covered and understand from each lesson; 1) The moral of every story and poem. 2) The grammer lessons and how to apply those lessons to other excercises. 3) The new vocabulary words. **For essay writing:** 1) Title 2) Introduction- No longer than 3 lines 3) Body- Don't forget to use paragraphs and proper puncuation marks. 4) Conclusion
Unit 2	Page 77……128	
Unit 3	Page139…….189	

Subject	Arabic 2
Papers	1 paper

Unit	Topics Covered	Study Strategies
Unit 14	page 106…….113	Re-read all the units covered and understand from each lesson; 4) The moral of every story. 5) The grammer lessons and how to apply those lessons to other excercises. 6) The new vocabulary words. **For essay writing:** 5) Title 6) Introduction- No longer than 3 lines 7) Body- Don't forget to use paragraphs and proper puncuation marks. 8) Conclusion
Unit 15	page 114……..121	
Unit 16	Page 122…….129	
Unit 17	page 130…….137	

Islamic

Subject	Islamic 1
Papers	من ص 8 الى صفحة 45

Unit	Topics Covered	Study Strategies
المحور الرابع : العقلية الإيمانية	**1- السنن الشرطية فى السنه النبوية** **2- الاتباع والقليد** **3- الاجتهاد** **4- الزواج طريق الاستعفاف** **الآيات من سورة النور من (آيه 32/ 34)**	المصطلحات –اقسام السنة- اسئلة الدرس الداخلية – النشاط ص 16 الاتباع والتقليد التركيز على كل الدرس من ص 18 الى 26 الاجتهاد كل الدرس من ص 28 الى ص 35 الزواج طريق الاستعفاف كل الدرس من 38 الى45

Business Studies

Subject	Business – Year 12 and 13
Papers	**Paper 1 Short answer and essay 1 hour 15 minutes (AS Level)** Section A: Four short answer questions Section B: One essay from a choice of three questions **Paper 2 Data response 1 hour 30 minutes (AS Level)** Two data response questions **Paper 3 Case Study 3 hours (A Level)** Five questions and one essay (from a choice of two) based on a case study

Unit	Topics Covered	Study Strategies
1. Business and its environment	AS Level • Enterprise • Business structure • Size of business • Business objectives • Stakeholders in a business A Level • Business structure • Size of business • External influences on business activity	Theory Use the Revision Textbook for support on key topics as well as Business Text book for wider understanding on topics further. Review all topic notes thoroughly, highlight and areas further assistance with is needed. Teacher Assistance Lessons prior to exam inform teacher of any missed topics or topics which require further help with to understand. Ensure to seek teacher guidance for any topics still unclear before mock exams
2. People in organisations	AS Level • Management and leadership • Motivation • Human resource management A Level • Human resource management • Organisational structure • Business communication	
3. Marketing	AS Level • What is marketing? • Market research • The marketing mix A Level • Marketing planning • Globalisation and international marketing	
4. Operations and project management	AS Level • The nature of operations • Operations planning • Inventory management A Level • Operations planning • Capacity utilisation • Lean production and quality management • Project management	

Subject	AS Level History – Year 12
Papers	The Search for International Peace and Security, 1919–1945: Component 1 (one hour)

Unit – Key Areas & Questions	Topics Covered	Study Strategies
What were the origins and aims of the League of Nations?	• The role of US President Wilson and the creation of the League • Aims of the League • Key figures: Cecil (UK), Smuts (South Africa), Bourgeois (France) and Hymans (Belgium) and others • The covenant – relevant articles • Peacekeeping, collective security and international co-operation	✓ **plan your revision** ✓ **Go over the notes you made in class (including class and homework tasks)** ✓ **Read over your teacher's feedback and comments** ✓ **Look at the past papers you completed in class** ✓ **Practise analysing historical sources** ✓ **In the exam, plan your answer and ensure you allocate sufficient time to answer all questions** ✓ **Ask your teacher if you have any questions** **What skills will I be tested on in the exam?** ▪ **Knowledge and understanding** ▪ **Analysis and evaluation skills** ▪ **Recall/select and apply relevant knowledge or information when answering questions** ▪ **Comprehension of sources including its contents and historical setting** ▪ **Ability to reach a focused, balanced and substantiated judgement** ▪ **Ability to effectively communicate and write a strong argument which is supported by evidence and a well explained conclusion** ***REMEMBER TO USE THE PAPER 1 RECIPE/ FORMULA FOR ANSWERING QUESTIONS – SEE CHECKLIST GIVEN TO YOU IN CLASS***
How was the League of Nations organised?	• Reasons why the USA, Russia and Germany were not involved • The General Assembly and The Council • Permanent Court of International Justice, The Secretariat, Commissions and Committees • Issues with the structure of the League	
What were the successes and failures of the League of Nations?	• Successes – organisations for labour, refugees, health; Mandates Commission; minor political disputes • Failures – Disarmament Commission; major political disputes (e.g. Manchuria, Abyssinia) • Reasons for the League's failure to preserve peace e.g. Great Depression etc.	
What were the origins and aims of the United Nations?	• The role of US President Roosevelt • Creation of the UN • The San Francisco Conference and the Charter • The UN's structure • Similarities and differences between the United Nations and the League of Nations • Success and failures of the UN	

Subject	A2 History – Year 13
Papers	Edexcel Unit 3, Topic B1: France, 1786-1830: Revolution, Empire and Restoration One Paper Time required – 1 hour

Unit	Topics Covered	Study Strategies
Origins of the French Revolution	➢ What were the long-term causes of the French Revolution? ➢ How did the structure of the Ancien regime contribute to problems? ➢ What were the problems with the taxation system? ➢ What were the problems with the class system? ➢ What impact did the Enlightenment have on the Ancien regime	**In your exam, you will be tested on your background knowledge & essay writing skills. You must show and demonstrate your ability to:** ✓ Recall, select and deploy information and understand concept and features ✓ Produce a sustained analytical answer that shows clear understanding of the focus of the question ✓ Ensure well-structured statements that discuss the evidence used to support/reject/modify the interpretation or statement ✓ Reach a valid conclusion **Remember to:** ▪ Plan your revision ▪ Go over the notes you made in class (including class and homework tasks) ▪ Read over your teacher's feedback and comments ▪ Look at the exam style/essay questions in your textbook and the ones you have completed for homework ▪ In the exam, plan your answer and ensure you allocate sufficient time to all questions
The Downfall of Absolute Monarchy, May-October 1789	➢ Estates General to National Assembly May-June ➢ The Loss of Royal control of Paris, July ➢ Rural riots and the Great Fear: Abolition of Feudalism,-July- ➢ August ➢ The Declaration of the Rights of Man, August ➢ The Court moves from Versailles to Paris, October	
<u>Useful book chapters to read:</u> **France in Revolution (4th Edition) by Dylan Rees:-** • Chapter 1 Pages 1-21 • Chapter 2 Pages 27-46 **France in Revolution 1776-1830 by Sally Waller:-** • Pages 1 75 <u>Useful websites for extra background reading:</u> • http://www.activehistory.co.uk/Miscellaneous/menus/IB/French_Rev_Napoleon/index.php [see me for the password to access extra resources] • http://pastmatters.org/as-level-the-french-revolution/ • http://frenchhistorysociety.co.uk/french_revolution.htm • http://www.sparknotes.com/history/european/frenchrev/		

Geography

Subject	Year 12 Geography
Papers	2 short answer questions 1 essay

Unit	Topics Covered	Study Strategies
Rivers	Drainage Basin Hydrological Cycle Components of a Drainage Basin Storm Hydrographs River channel processes and landforms The Human Impact on Rivers	Revision booklets Short answer questions practise Essays practise Read textbooks and notes provided Research using internet Make revision notes Read mark schemes and examiners reports Use Learner guide, SOW, Example candidate responses Learn glossary
Rocks and Weathering	Plate Tectonic theory Weathering and rocks Slope processes and development The Human impact on weathering and slopes	

Subject	Year 13 Geography
Papers	1 essay 1 essay

Unit	Topics Covered	Study Strategies
Coasts	Wave, marine and sub-aerial processes Coastal landforms of cliffed and constructive coasts Coral reefs Sustainable management of coasts	Revision booklets Essays practise Read textbooks and notes provided Research using internet Make revision notes Read mark schemes and examiners reports Use Learner guide, SOW, Example candidate responses Learn glossary
Hazards	Hazardous environments resulting from crustal tectonic movement Hazardous environments resulting from mass movements Hazardous environments resulting from atmospheric disturbances Sustainable management in hazardous environments	

English Literature

Subject	**Year 12 English Literature**
Papers	**Paper 3** Poetry and Prose **Paper 4** Drama

Unit	Topics Covered	Study Strategies
Paper 3 Poetry and Prose	**Poems No. 1 – No. 18** 1. Comment closely on ways in which the **imagery** and **tone** of poems develop a particular view of human life. 2. Poets' wit and philosophical outlook of life. 3. How love, anger, despair and regret are portrayed in poems. 4. Compare the treatment of the 'torments' of love. **Novel: *The Namesake.*** 1. Jhumpa Lahiri's writing style, plot & characterization. 2. Themes. 3. The peculiarity of Gogol's name. 4. The official name change from Gogol to Nikhil. 5. Moushumi Mazoomdar's prenuptial disaster. 6. ABCD's "American-born confused Deshi".	1. Re-read texts – be thorough! 2. Focus on the coverage/topics listed. 3. Re-read essays and focus on: (a) Answering/addressing the topic, (b) Develop/expand 3 Key Points. (c) Look at the literary features – author's style and language use, (d) Write a convincing conclusion! 4. In groups, discuss the topics listed and prepare summaries, spider/web maps etc. 5. Relook at the A3 summary charts. 6. Know the characterization, plot, themes and style.
Paper 4 Drama	**Text: *A Man for All Seasons.*** **1. Foreshadowing:** Richard Rich and Sir Thomas More. **2. Suspense, patronage & favour.** 3. Sarcasm & comical events. 4. Diplomacy? Politics? Or, Machiavellian? 5. Robert Bolt's style & stagecraft. 6. Steward's treachery – eavesdropping & disloyalty. 7. Sir Thomas More – hero? Philosopher or plain idiot? 8. The role of women in the play. 9. Trickery & guilty conscience. 10. Characterization. 11. Narrative significance.	

Subject	**YEAR 13 English Literature**
Papers	**PAPER 5:** Shakespeare and Other Pre 20th Century Texts **PAPER 6:** 20th Century Texts **PAPER 6:** 20th Century Texts

Unit	Topics Covered	Study Strategies
PAPER 5: Shakespeare and Other Pre 20th Century Texts –– *The Great Expectations* (1 hour).	1. Ambition and Self-Improvement. 2. Social Class. 3. Crime, Guilt, and Innocence. 4. Pip, the novel's protagonist. 5. The strict rules and expectations that governed Victorian England. 6. A secret benefactor. 7. Motifs and symbols - Satis House**.**	1. Re-read texts – be thorough! 2. Focus on the coverage/topics listed. 3. Re-read essays and focus on: (a) Answering/addressing the topic, (b) Develop/expand 3 Key Points. (c) Look at the literary features – author's style and language use, (d) Write a convincing conclusion! 4. In groups, discuss the topics listed and prepare summaries, spider/web maps etc.
PAPER 6: 20th Century Texts – MONDAY, PERIOD 4 – on *Americana* (1 hour).	1. Discuss the narrative significances of Ifemelu's long stay in the Miriama African Hair Braiding Salon. 2. Discuss the effects of the writing in the following passage, and show how far it is characteristic of Adichie's narrative methods and concerns. (pages 6-8). 3. Discuss Ifemelu's relationship with Obinze and its narrative significance in *Americanah.* 4. 'In *Americanah*, success and independence are seen as a challenge and responsibility.' How does Adichie present this in the novel?	
PAPER 6: 20th Century Texts – TUESDAY, PERIOD 7 – on *The White Tiger* (1 hour).	1. Adiga's portrayal of the impoverished citizens of India. 2. The author's style and characterization. 3. How does the protgonist Balram characterize "entrepreneurship" in Bangalore? 4. Discuss *The White Tiger* as a novel highlighting the social evils in India.	

Subject	AS Level English Language
Papers	Paper 1 – Passages 2hours 15 minutes

Unit	Topics Covered	Study Strategies
English Language – Dr.J.Pattison;D.Williams. Chapter 1. Chapter 2. Chapter 3. Chapter 4.	**Introduction to Part 1.** **A toolbox for textual analysis.** **Language issues.** **Your own writing.**	1.Re-visit the chapters and units of work in each of the textbooks. 2.Work through the additional Exam Paper booklet. 3.Extra help is available on Tuesday afternoons in room 105. 4.Read examples of different genres (types of writing).
English Language – M.Gould;M.Rankin Unit 1. Unit 2.	Reading and Writing Skills. Types of Non-Fiction Text. Writing Non- Fiction.	

Subject	A Level English Language.
Papers	Paper 3 – Text Analysis 2 hours 15 minutes.

Unit	Topics Covered	Study Strategies
English Language – Dr. J. Pattison; D.Williams. Chapter 7. Chapter 8. Chapter 9. Chapter 10.	**Introduction.** **Advanced textual analysis: media texts.** **Advanced textual analysis: literary texts.** **Advanced textual analysis: spoken texts.**	1.Re-visit the chapters and units of work in each of the textbooks. 2.Work through additional exam questions. (supplied by BAB.) 3.Extra help is available on Tuesday afternoons in room 105. 4.Read examples of different genres (types of writing).
English Language – M.Gould;M.Rankin. Unit 4.	Text and discourse analysis.	

Subject	Psychology – Year 12 and 13
Papers	Unit 1 Unit 3

Unit	Topics Covered	Study Strategies
Unit 1	**Social psychology** **Obedience** **Prejudice** **Individual differences** **Developmental psychology** **Key studies** **Key issues** **Research Methods** **Practicals** **Cognitive psychology** **Memory models** **Individual differences** **Developmental psychology** **Key studies** **Key issues** **Research Methods** **Practicals**	Create mind maps/posters/flashcards for all of the topics covered in these units. Answer exam questions.
Unit 3	**Criminological psychology** **Definitions** **Social Learning Theory** **Self-fulfilling phrophecy** **Key studies** **Methodology** **Key issue** **Child psychology** **Definitions** **Methodology** **Theories: Bowlby and Ainsworth** **Deprivation/privation** **Day care** **Key studies** **Key issue**	

Subject	FRENCH AS Level – Year 12
Papers	Unit 1 Code 6FR01Spoken Expression and Response in French Unit 2 Code 6FR02 Understanding and Written Response in French

Unit	Topics Covered	Study Strategies
Youth culture and concerns	• Family relationships • Friendships • Peer pressure • The internet • Mobile phones • Video games • Reality TV	Reread all the units that we have studied, noting any words that you are still unsure of. Review the main grammar points in your grammar book. Practice making sentences with the main grammar points and vocabulary covered. Push yourself to write longer and more complex sentences. Look on the internet for French-language texts related to the topics covered. Choose one of the principal French daily papers and read headlines/articles on your mobile phone or computer every day. Watch one French movie or documentary on the internet every week. With a friend, practice giving short talks ('Just a minute') about the topics we have covered. Try to do some revision every day rather than 'cramming' a few days before the exam.
Lifestyle, health and fitness	• Sports and leisure activities • Changing lifestyles • Nutrition and diet • Health awareness campaigns • Weight the BMI • Smoking	
Education and employment	• The French education system • School and college life • Student issues and concerns • Tertiary education in France • Career choices • Finding the right job • The world of work, changes in organisation and working practices • Unemployment	
The world around us	• Why take holidays • Travel and transport • The environment • Traffic emissions • Global warming • Sustainable development • Saving Planet Earth	

Subject	FRENCH A2 Level – Year 13
Papers	Unit 3 Code 6FR03 Understanding and Spoken Response in French Unit 4 Code 6FR04 Research, Understanding and Written Response in French

Unit	Topics Covered	Study Strategies
History, art and literature	• Historical periods, art and literature • Analysing a film • The role of a film director • Theatre • French writers and their works • A city and its architecture	Reread all the units that we have studied, noting any words that you are still unsure of. Make topic-based vocabulary glossaries. Review the main grammar points in your grammar book. Choose one of the French daily papers and read headlines and articles on your phone every day. Research topic: make study cards for each of the main points you plan to cover, e.g. history, geography, industry, population. Make sure that your evidence is accurate and appropriate. Attend extra speaking practice sessions after school.
Society and current affairs	• Money and wealth distribution • Crime and punishment • Immigration and integration • Prejudice, racism and discrimination	
Global issues	• Global poverty • The Second World War • Genocide • Migration and refugees • Modern day heroes • Sport and cheating • Technology now and in the future	
Traditions and beliefs	• Cloning • Genetically modified organisms • Euthanasia • Traditions around the world • Women's status and rights • NGOs • Anti-globalisation	

Spanish

Subject	Spanish AS Level – Year 12
Papers	Unit 1 Code 6SP01Spoken Expression and Response in Spanish Unit 2 Code 6SP02 Understanding and Written Response in Spanish

Unit	Topics Covered	Study Strategies
Youth culture and concerns	• Family relationships • Friendships/El botellon • The mass media • Mobile phones • Young Spanish people today	When you are revising for the exam during this period, bear in mind the following points: • Good control of the grammar is essential. Revise systematically all major areas of grammar, especially the use of tenses and moods of the verbs, noting any habitual weaknesses that your teacher has pointed out to you. • Revise systematically all vocabulary for the topics that you have studied. • Continue listening to spoken Spanish on a regular basis right up to the listening exam. • Practise oral work with a Spanish speaker. Don't learn presentations by heart, since this leads to unnatural delivery, but try to express them spontaneously. • Continue to read extracts in preparation for the reading exam, e.g. from a digital newspaper (*El País* or *El Mundo* in Spain, *Clarín* in Argentina). • Re-read your course written work, paying special attention to the teacher's comments; where you have weaknesses in your written expression try to remedy them.
Education and employment	• School and college life • Student issues and concerns • Career choices • Finding the right job • The world of work, changes in organisation and working practices • Unemployment	
Lifestyle, health and fitness	• Sports and leisure activities • Changing lifestyles • Nutrition and diet • Health awareness campaigns • Smoking	
The world around us	• Why take holidays • Travel and transport • The environment • Traffic emissions • Global warming • Sustainable development • Saving Planet Earth	

Subject	Spanish A2 Level – Year 13
Papers	Unit 3 Code 6SP03 Understanding and Spoken Response in Spanish Unit 4 Code 6SP04 Research, Understanding and Written Response in Spanish

Unit	Topics Covered	Study Strategies
The world around us	• Environmental issues which face modern society • Climate change and renewable energy • Weather/climate change • Environmental issues specific to Spain and how these are being addressed	The emphasis in language-learning lies more on building up the level of linguistic skill to the point where you are ready to take the examination. When you are revising for the exam during this period, bear in mind the following points: • Good control of the grammar is essential. Revise systematically all major areas of grammar, especially the use of tenses and moods of the verbs, noting any habitual weaknesses that your teacher has pointed out to you. • For any part of the examination for which you have to produce evidence (e.g. in a cultural essay or a research paper), make sure that your evidence is accurate and appropriate. **Research-based essay** The following websites refer to the country or region that figures in each of the A2 units 8-13. They will help you to prepare for the research-based essay in the Edexcel exam if you base it on an aspect of one of these countries or regions. www.historiasiglo20.org/HE/5b.htm www.biografiasyvidas.com/biografia National and international events: past, present and future • **Past** La historia escamoteada del canal de Panamá **http://blogs.lainformacion.com/zoomboomcrash/2014/08/17/la-historia-escamoteada-del-canal-de-panama-el-fracaso-de-un-visionario/** El Canal de Panamá I: La tecnología al servicio de la globalización.http://www.madrimasd.org/blogs/CTSiberoamerica/2009/09/11/124650
Youth Culture and Concerns	• Impact of mobile phone technology on their lives and on society • Mobile phones (features/contract/pay as you go)and discuss their advantages and disadvantages and their importance to them • New technology and compare with those of their parents.	
Global issues	• Global poverty • Migration and refugees • Modern day heroes	
Traditions and beliefs	• Cloning/Genetically modified organisms • Euthanasia • Women's status and rights • NGOs • Anti-globalisation	

Economics

Subject	Economics AS – Year 12
Papers	Paper 1 Multiple Choice, 1 hour Paper 2 Data-response and Structured Essay, 1 hour 30 minutes

Unit	Topics Covered	Study Strategies
1. Basic economic ideas and resource allocation.	- Scarcity, choice and opportunity cost. - Positive and normative statements. - Factors of production. - Resource allocation in different economic systems and issues of transition. - Production possibility curves. - Money - Classification of goods and services.	Read through your class notes and textbook. Write notes or design mind-maps, revision cards or use any other technique which works and is useful for YOU. Read more case studies and listen to / read the news. Use the CD on your book to complete worksheets, exam questions, etc.. Ask your teacher in class for help, clarification, etc.. Become actively involved in class discussions regardless of the topic or the person who asked the question. Practise answering past papers using your notes, books and other resources, including the mark scheme, for revision and guidance. Give your answers to your teacher who will mark them and give you verbal and written feedback and advice on how to improve. Follow the advice and TRY AGAIN! The more you write, the more your writing will improve.
2. The price system and the micro economy.	- Demand and supply curves. - Price elasticity, income elasticity and cross-elasticity of demand. - Price elasticity of supply. - Interaction of demand and supply. - Market equilibrium and disequilibrium. - Consumer and producer surplus.	
3. Government microeconomic intervention.	- Maximum and minimum prices. - Taxes (direct and indirect). - Subsidies. - Transfer payments. - Direct provision of goods and services. - Nationalisation and privatisation.	
4. The macro economy.	- Aggregate Demand and Aggregate Supply analysis. - Inflation. - Balance of payments. - Exchange rates. - The terms of trade. - Principles of absolute and comparative advantage. - Protectionism.	
5. Government macro intervention.	- Types of policy: fiscal, monetary and supply side policy. - Policies to correct balance of payments disequilibrium. - Policies to correct inflation and deflation.	

Subject	Economics A2 – Year 13
Papers	Paper 3 Multiple Choice, 1 hour Paper 2 Data Response and Essays, 2 hours 15 minutes

Unit	Topics Covered	Study Strategies
6. Basic economic ideas and resource allocation.	- Efficient resource allocation. - Externalities and market failure. - Social costs and benefits; cost-benefit analysis.	Read through your class notes and textbook. Write notes or design mind-maps, revision cards or use any other technique which works and is useful for YOU. Read more case studies and listen to / read the news. Use the CD on your book to complete worksheets, exam questions, etc.. Ask your teacher in class for help, clarification, etc.. Become actively involved in class discussions regardless of the topic or the person who asked the question. Practise answering past papers using your notes, books and other resources, including the mark scheme, for revision and guidance. Give your answers to your teacher who will mark them and give you verbal and written feedback and advice on how to improve. Follow the advice and TRY AGAIN! The more you write, the more your writing will improve
7. The price system and the micro economy.	- Law of diminishing marginal utility. - Indifference curves. - Budget lines. - Types of cost, revenue and profit, short-run and long-run production. - Different market structures. - Growth and survival of firms. - Differing objectives of firms.	
8. Government microeconomic intervention.	- Policies to achieve efficient resource allocation and correct market failure. - Equity and policies towards income and wealth redistribution. - Labour market forces and government intervention: - Demand and supply of labour. - Wage determination in perfect markets. - Wage determination in imperfect markets. - Government failure in microeconomic intervention.	
9. The macro economy.	- Economic growth, economic development and sustainability. - National Income statistics. - Classification of countries. - Employment/ Unemployment - The circular flow of income. - Money supply theory. - Keynesian and Monetarist schools. - The demand for money and interest rates determination. - Policies towards developing economies; policies of trade aid.	
10. Government macro intervention.	- Government macro policy aims. - Inter-connectedness of problems. - Effectiveness of policy options to meet all macroeconomic objectives.	

ICT

Subject	Applied ICT (AS)
Papers	Paper 1 (Theory) – 1 Hour Paper 2 (Practical) – 2 Hours

Unit	Topics Covered	Study Strategies
Theory: Unit 1	• Input Devices (including direct data entry devices) • Output Devices • Control Output Devices • Backing Storage media and devices • Portable communication devices	**Practicals** You must ensure that prior to the mock exam, you have revisited Chapter 11 and 14 from the textbook completed all the tasks and activities. Past exam booklets will enable you to prepare and practice at home – but please ensure that you transfer all data files from the student common folder to enable you to work from home. **Theory** Revise thoroughly using the class notes and textbook to learn the topics to be assessed. Review all homework and feedback that has been provided to ensure you can structure your answers correctly, as directed in the exam. Practice exam booklets are provided for you to further practice and develop your exam writing technique. **Teacher Assistance** ICT club is available to all students on Monday after school. Feel free to attend if you need any extra support or if you just want to dedicate some extra time to perfecting your practical skills. Any questions that you attempt and would benefit from marking and feedback from the teacher, please submit them in.
Theory: Unit 2	• Controls systems • Working Practices (including communications method and the use of video and phone conferencing) • Use of ICT in advertising • Use of ICT in teaching and learning • Use of ICT in data management (file systems) • Payroll applications • Technical and customer support (CTI) • Art and Design work	
Practical: Database and charts	• Designing a database structure using existing files • Create complex create to perform searches and sorting of data • Performing calculations in both queries and reports • Outputting data in Access • Exporting data into different packages • Producing graphs and charts in Excel	
Practical: Using Spreadsheets	• Creating a spreadsheet model • Manipulating strings • Using formulae and complex functions • Performing searches and sorting of data • Output selected data	

Subject	**ICT A2 Level**
Papers	Theory: 02 Practical:04

Unit	**Topics Covered**	**Study Strategies**
Theory: Unit 5 How organisations use ICT 2	How organisations use ICT 2 Expert system, monitoring and measurement project management, modelling, market research, research applications online applications Stock control	<u>THEORY</u> -Read through your class notes and textbook, PowerPoint which you must copy in your pen drive for revision or email yourself all the work from your user profile. -Write notes or design mind-maps, revision cards or use any other technique which works and is useful for YOU. -Practise answering past papers using your notes, books and other resources, including the mark scheme, for revision and guidance. Take guidance from the exemplar booklet on techniques of writing an answer by . <u>Practical:</u> Keep practicing the past exam papers. Remember the more you do the perfect you become.
Theory Unit 6 The impact of ICT on society 2	• Digital divide • Catering for disabilities • Legal and political systems • Computer fraud • Anti social use of ICT • Home entertainment system • Internet auction • Booking systems • Information services/ information provided by lcal, regional and central govt. • Use of ICT in teaching and learning	
Practical : Unit 15: Mail Merge	Mail Merge: Creating master document and source file, mail mergelabels Running mail merge.Setting up field for automatic completion and to control record selectionUsing manual methods and software tools to ensure error free accuracy.	
Unit 16; Automation: creating	Automation: creating • Menu system in MS Word, MS Access • Macros in MS Word and Excel • paste link worksheets • Visual basic in applications (coding) • Performing calculations	
Unit 17:	Output data: How to print mail merged documents, hyperlinks, macros, forms, linked queries, calculated controls in access reports.	