

EMS Doha Secondary Curriculum Guide '26-27

SUBJECT: A2 Physics

TEACHER(S): Ms Faten

TERM 1	TERM 2	TERM 3
Unit 12: Motion In A Circle 12.1 Kinematics of uniform circular motion 12.2 Centripetal acceleration Unit 17: Oscillations 17.1 Simple harmonic oscillations 17.2 Energy in simple harmonic motion 17.3 Damped and forced oscillations, resonance Unit 14: Temperature 14.1 Thermal equilibrium 14.2 Temperature scales 14.3 Specific heat capacity and specific latent heat Unit 15: Ideal Gases 15.1 The mole 15.2 Equation of state 15.3 Kinetic theory of gases Unit 16: Thermodynamics 16.1 Internal energy 16.2 The first law of thermodynamics Unit 13: Gravitational Fields 13.1 Gravitational fields 13.2 Gravitational force between point masses 13.3 Gravitational field of a point mass 13.4 Gravitational potential Unit 19: Capacitance 19.1 Capacitors and capacitance 19.2 Energy stored in a capacitor 19.3 Discharging a capacitor	Unit 18: Electric Fields 18.1 Electric fields and field lines 18.2 Uniform electric fields 18.3 Electric force between point charges 18.4 Electric field of a point charge 18.5 Electric potential Unit 20: Magnetic Fields 20.1 Concept of a magnetic field 20.2 Force on a current-carrying conductor 20.3 Force on a moving charge 20.4 Magnetic fields due to currents 20.5 Electromagnetic induction Unit 21: Alternating Currents 21.1 Characteristics of alternating current 21.2 Rectification and smoothing Unit 22: Quantum Physics 22.1 Energy and momentum of a photon 22.2 Photoelectric effect 22.3 Wave-particle duality 22.4 Energy levels in atoms and line spectra Unit 23: Particle Physics And Nuclear Physics 11.1 Atoms, nuclei and radiation 11.2 Fundamental particles 23.1 Mass defect and nuclear binding energy 23.2 Radioactive decay	Unit 24: Medical Physics 24.1 Production and use of ultrasound 24.2 Production and use of X-rays 24.3 PET scanning Unit 25: Astronomy And Cosmology 25.1 Standard candles 25.2 Stellar radii 25.3 Hubble's law and the Big Bang theory. Revision and preparation for A- Level examination

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KEY TEXTBOOK:

- Cambridge International AS and A Level Physics Coursebook with online access
David et Al 2nd Edition.

HOW TO HELP YOUR CHILD:

Parents are encouraged to support their child's learning by taking an active interest in the subject and checking homework, test and project schedules.

This is a subject with a vast syllabus that requires a regular study regimen for your child.

Please check the school google site for updates on work covered in class.

Please do not hesitate in setting up an appointment with me if you wish to discuss anything to do with your child.