ZIAUDDIN UNIVERSITY
EXAMINATION BOARD

EXAMINATION SYLLABUS 2020-2021

Grade:X **Subject: Physics**

This exam syllabus is produced to facilitate teachers, students and the test setters to teach, learn and assess subject specific learning. This syllabus is condensed to align the course content with the teaching learning time during. COVID 19.

DETAIL SYLLABUS

UNIT	TOPIC	TEXT BOOK PAGE NUMBER	COGNITIVE LEVELS K	U	A
1. Introduction	1. What is PHYSICS? 2. Importance of PHYSICS in daily life.	1-6	✓	✓	
2. Measurement	1. Physical quantities 2. Measuring instruments (Vernier caliper, micrometer screw gauge, physical balance)	13-16,19-22	✓		✓
3. Kinematics of linear motion	1. Rest & motion 2. Types of motion 3. Distance & Displacement 4. Speed 5. Velocity 6. Acceleration 7. Equations of motion	32-41		✓	✓
4. Motion & force	1. Force 2. Newtons laws of motion 3. Mass & weight	46-53,58-60	✓	✓	✓

	4. Momentum				
5. Vectors	1. Introduction (scalar, vectors) 2. Vector representation 3. Resolutions of vectors	70,71,77-84	✓		✓
6. Equilibrium	1. Torque or moment of a force 2. Centre of gravity 3. Conditions of equilibrium 4. States of equilibrium	86-89,94-107	✓	✓	
7. Circular motion & Gravitation	1. Uniform circular motion 2. Centripetal acceleration 3. Centripetal force 4. Law of universal Gravitation 5. Mass of Earth 6. Variation of 'g' decreases with altitude	108-110,113-116	✓	✓	
8. Work, Power & Energy	1. Work 2. Power **3.** Energy 4. Kinetic energy 5. Gravitational potential Energy	122-126	✓	✓	✓
9. Simple machines	N.B: **This Chapter may be skipped (Excluded)**				
10. Properties of Matter	1. Elasticity 2. Hooks law applied to a helical spring 3. pressure 4. Pascals law	151-174	✓		✓

	5. Application of pascal law (hydraulic lift) 6. Archimedes principle 7. Analytical treatment of Archimedes principle 8. Buoyancy & law of floatation 9. Kinetic molecular theory of matter				
11. Heat	1. Temperature 2. General features of a thermometer 3. Mercury in glass thermometer 4. Thermal expansion 5. Linear thermal expansion of solids 6. Volume thermal expansion 7. Anomalous expansion of water 8. Boyles law 9. Charles law 10. General gas equation 11. Heat capacity 12. Specific heat capacity	182-185,189-217	✓	✓	✓
12. Waves & sound	1. Simple harmonic motion 2. Example of simple harmonic	226-235,241,244	✓		✓

	motion (simple pendulum) 3. Wave motion 4. Characteristics of wave 5. How sound is produced? 6. Velocity of sound				
13. Propagation & reflection of light	1. Reflection of light 2. Laws of reflection 3. Regular & irregular reflection 4. Mirror formula (equation for spherical mirrors)	263-265,272	✓	✓	
14. Refraction of light & optical instruments	1. Refraction of light 2. Refraction of light through prism 3. Lenses 4. Thin lens formula 5. Magnification 6. Optical instruments (human eye)	280-305	✓	✓	
15. Nature of light &electromagnetic spectrum	1. Quantum theory & dual nature of light 2. The spectrum	318-320		✓	✓
16. Electricity	3. Insulator & conductor 4. Coulombs law 5. Electric field 6. Capacitor 7. Electromotive force (e.m.f) 8. Electric current 9. Resistance 10. Ohms law	328,329,337,338 332	✓		✓

17. Magnetism & electromagnetism	1. Magnetic force 2. Magnetic field 3. Force on a current carrying conductor in a magnetic field	372,373384,385		✓	✓
18. Electronics	1. N-type and p-type substances 2. P-n junction diode	395-398	✓		✓
19. Nuclear Physics	1. Natural radioactivity 2. Alpha beta & gamma rays 3. Nuclear fission 4. Nuclear fusion	416-418422-425	✓		✓