



End of Term 1 Exam Coverage	هيكل اختبار نهاية الفصل الدراسي الأول
Grade 9 Advanced - Physics	الصف التاسع - متقدم - الفيزياء
Academic Year 2026-2027	العام الدراسي 2027-2026
Inspire	انسباير

عدد الأسئلة / Number of questions		درجة السؤال Marks Per Question	الدرجة القصوى Maximum grade
[1→16]	عدد الاسئلة الموضوعية (16) Number Of MCQ	4 , 2	100
[17→20]	عدد الاسئلة المقالية (4) Number of FRQs	9 ~ 11	
مدة الاختبار Exam duration		طريقة التطبيق Mode of implementation	الألة الحاسبة Calculator
150 minutes 150 دقيقة		إلكتروني وورقي Electronic & Paper	مسموح بها Allowed

 DRAFT – Prepared for teachers’ feedback only. Please do not share it with students or any other parties.	مسودة: أعد هذا الهيكل للحصول على التغذية الراجعة من المعلمين فقط، ويرجى عدم مشاركته مع الطلبة او جهات اخرى	
 Questions might appear in a different order in the actual exam.	 قد تظهر الأسئلة بترتيب مختلف في الاختبار الفعلي.	

Q. T	Q.No	Learning outcome	Reference	Page
أسئلة اختيار من متعدد Multiple Choice Question	1	✓ List the common steps of the scientific method used in investigations.	S.T C.Y.P(Q. [1,2,3])	4~6 8
	2	✓ Explain why scientists use models and give some common examples of models.	S.T	6~7
	3	✓ Differentiate between scientific theory and scientific law.	S.T	7
	4	✓ Identify the prefixes used with SI units and use them to convert units.	S.T	10~11
	5	✓ Identify the significant digits in a given number.	S.T	11~12
		✓ Use appropriate significant figures to record answers from a mathematical operation, with the correct number of digits.	C.Y.P(Q. 8)	12
	6	✓ Compare and contrast precision and accuracy with examples.	S.T	14
			C.Y.P(Q. [12,13,16,17])	16
	7	✓ Represent data in graphical form, draw the best-fit line, and identify from the shape of the graph if the relationship between the variables is linear, quadratic, or inverse.	S.T	17~21
			C.Y.P(Q. [19,20,21,22,23])	22
	8	✓ Represent changes in position through motion diagrams. ✓ Represent changes in position through a particle model.	S.T	30 ~31
			C.Y.P(Q. [3,4,5])	31
	9	✓ Classify physical quantities into vector and scalar quantities (distance, mass, displacement, speed, velocity, acceleration, force, work, energy, pressure).	S.T	33
	10	✓ Convert a particle model to a position-time graph and vice versa.	S.T P.P(Q.[10,11,12,14]) C.Y.P(Q. [20,21,22,23])	37~38 39 41
			S.T , E.P(2) P.P(Q.13)	40 39
أسئلة مقالية Free Response Questions	11	✓ Interpret a position-time graph that represents the motion of multiple objects.	P.P(Q.[15,16,17,18,19])	41
	12	✓ Differentiate between average velocity and instantaneous velocity. ✓ Differentiate between uniform and non-uniform motion. ✓ Recognize uniform or non-uniform motion from a motion diagram or a particle model.	S.T	43 ~ 44
			S.T	54 ~ 56
	13	✓ Describe the motion of an object if its velocity and acceleration are either in the same direction or opposite direction; hence, state if an object is slowing down or speeding up.	S.T	56
	14	✓ Apply the equation of motion relating the final velocity of an object to its initial velocity, uniform acceleration, and time ($v_f = v_i + at$).	P.P(Q. [16,17,18,19])	65
	15	✓ Apply the alternative equation of motion relating an object's final velocity to its initial velocity, its constant acceleration, and its initial and final positions [$v_f^2 = v_i^2 + 2a(x_f - x_i)$]	E.P(4)	68
			P.P(Q. [23,24,25,26])	68
	16	✓ Define free fall and free-fall acceleration. ✓ Describe the motion of an object under free fall during its rising and falling motion.	S.T	71~74
	17	✓ Explain the importance of making careful measurements. ✓ Explain why the results of measurements are often reported with uncertainty. ✓ Conduct an experiment to measure the dimensions and masses of several objects, using SI units. ✓ Define and identify independent and dependent variables for a given data set. ✓ Classify common quantities into base and derived quantities with their SI units.	S.T	11~14
			S.T	17~18
			S.T	9
	18	✓ Determine displacement using vector addition or subtraction in one dimension. ✓ Define and calculate the average velocity using a suitable mathematical representation. ✓ Define and calculate the average speed using a suitable mathematical representation. ✓ Define and calculate the average acceleration.	S.T/Fig.10	32~36
			S.T	42~45
			P.P(Q. [26,28,29])	45
			P.P(Q. [32,33,34,34])	47
			C.Y.P(Q. [41,42])	48
	19	✓ Define displacement as the change in an object's position. ✓ Differentiate between distance travelled and displacement. ✓ Analyze a position-time graph to describe an object's motion.	S.T	58~59
			P.P(Q. [8,9,10])	61
	20	✓ Interpret the velocity-time graph for a single or multiple objects in motion. ✓ Relate the slope of a velocity-time graph to the average acceleration of the object in motion. ✓ Calculate the displacement as the area under the curve of a velocity-time graph. ✓ Calculate the acceleration from the slope of the velocity-time graph.	S.T	32~39
			E.P(1, 2)	39,40
			P.P(Q. [10,11])	39
	20		S.T	57~59
			E.P(1, 2,3)	60,61,66
			P.P(Q. [1, 2, 3, 4])	60
			C.Y.P(Q. [12,14])	62
			P.P(Q. [20, 21, 22,])	66

	Q.T: Question Type	Q.No: Question Number	S.T: Student Book	P.P: Practice Problems.
	Reference: Reference(s) in the Student Book (English Version or Arabic Version).		E.P: Example Problem.	C.Y.P: Check Your Progress.