

Rubrics : SSC 1st ANNUAL EXAMINATION 2023

Subject: PHYSICS-I (HA) FINAL : 29-04-2023 (4:47PM)

Q No/ Part No	Criteria	LEVEL 1 (Marks)	LEVEL 2 (Marks)	LEVEL 3 (Marks)	LEVEL 4 (Marks)	LEVEL 5 (Marks)
2 (i)	Conversion	Correct conversion from 1 ton to milligram (03)	Partially correct (02)	Some relevant steps (01)	Wrong (0)	
2(ii)	Calculation	Correct calculation (03)	Partially correct (2)	Some relevant steps (01)	Wrong (0)	
2 (iii)	Differences between mass and weight	Any three correct differences (03)	Any two correct differences (02)	Any one correct difference/ relevant information (01)	Wrong (0)	
2 (iv)	Magnitude of force in term of rectangular components	Correct derivation and figure (02)	Partially correct (01)	Some relevant steps (0.5)	Wrong (0)	
	Direction of force	Correct derivation (01)	Partially correct (0.5)	Wrong (0)		
2 (v)	Definition of torque	Correct definition (01)	Partially correct (0.5)	Wrong (0)		
	Factors affecting torque	Correctly writing names of factors, their brief explanation OR formula with description (02)	Partially correct (01)	Any relevant information (0.5)	Wrong (0)	
2 (vi)	Equilibrium	Correct definition (01)	Partially correct (0.5)	Wrong (0)		

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	1st condition of equilibrium	Correct statement (01)	Partially correct (0.5)	Wrong (0)		
	2nd condition of equilibrium	Correct statement (01)	Partially correct (0.5)	Wrong (0)		
2 (vii)	Gravitational field	Correct definition (01)	Partially correct (0.5)	Wrong (0)		
	Gravitational field strength	Correct description with mathematical formula (02)	Partially correct (01)	Some relevant information (0.5)	Wrong (0)	
2 (viii)	Differences between boiling and evaporation	Any two correct differences (03)	Any one correct difference (02)	Some relevant information (01)	Wrong (0)	
2(ix)	Heating and ventilation system of buildings by convection	Correct explanation (03)	Partially correct (02)	Some relevant information (01)	Wrong (0)	
2 (x)	Mercury as thermometric substance	Any three correct properties (03)	Any two correct properties (02)	Any one correct property/ some relevant information (01)	Wrong (0)	
2 (xi)	Calculation of height	Correct calculation (03)	Partially correct (02)	Some relevant steps (01)	Wrong (0)	
2 (xii)	Calculation of K.E.	Correct calculation (03)	Partially correct (02)	Some relevant steps (01)	Wrong (0)	

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2. (xiii)	Factors affecting the liquid pressure	Correctly mentioning the factors e.g. density of liquid and depth (03)	Partially correct OR writing correct formula (02)	Some relevant information (01)	Wrong (0)	
2 (xiv)	Derive first equation of motion	Correct derivation with correct graph (03)	Partially correct (02)	Some relevant steps OR only correct graph (01)	Wrong (0)	
2.(xv)	Differences between vectors and scalars with examples	Correct differentiation with examples (03)	Partially correct response (02)	Some relevant information (01)	Wrong (0)	
3.(a)	Statement of Archimedes principle	Correct statement (02)	Partially correct (01)	Wrong (0)		
	Calculation of density of an object	Correct derivation with description (04)	Partially correct (03)	Some correct mathematical steps (02)	Some relevant information (01)	wrong (0)
3.(b)	Effect of change in atmospheric pressure on weather	Correct explanation of any three effects (04)	Correct explanation of any two effects (03)	Correct explanation of any one effect (02)	Some relevant information (01)	Wrong (0)
4. (a)	Definition of thermal expansion	Correct definition (02)	Partially correct (01)	Wrong (0)		
	Derivation of formula	Correct derivation with description and figure (04)	Partially correct (03)	Some correct mathematical steps (02)	Some relevant information (01)	Wrong (0)
4. (b)	Calculation of g	Correct calculation (02) (Either with the given formula or the correct formula)	Partially correct (01)	Wrong (0)		
	Calculation of orbital speed of satellite	Correct calculation (02) (Calculations based on given formula of g_h may also be considered correct)	Partially correct (01)	Wrong (0)		

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5 (a)	Initial description (for any situation/case)	Correct description with figure (02)	Partially correct (01)	Some relevant information (0.5)	Wrong (0)	
	Derivation of acceleration	Correct derivation (02)	Partially correct (01)	Wrong (0)		
	Derivation of tension in string	Correct derivation (02)	Partially correct (01)	Wrong (0)		
5(b)	Definition of K.E.	Correct definition (01)	Partially correct (0.5)	Wrong (0)		
	Derivation of its formula	Correct derivation (03)	Partially correct (02)	Some correct mathematical steps (01)	Wrong (0)	

Note: All the markers must know the solutions of all the question items of the question paper before starting marking.