



Date: 11/07/22  
GRADE: IX

MONTHLY TEST -01 (2022-23)  
PHYSICS (042)

Max marks: 20  
Time: 1 Hour

General Instructions:

1. There are 9 questions in the question paper.
2. All questions are compulsory.

Qn. No		Marks allocated
<b>SECTION A</b>		
1	Which among the following is the dimensional formulae for charge? A. $[M^0L^0TA]$ B. $[ML^2T^3A^{-2}]$ C. $[M^0LT^{-1}]$ D. $[MLT^{-2}]$	1
2	Choose the correct answer from the following after Rounding off the number 18.35 up to 3 digits. A. 18.4 B. 18.3 C. 18.2 D. 18.30	1
3	<b>Assertion:</b> When we change the unit of measurement of a quantity, its numerical value changes. <b>Reason:</b> Smaller the unit of measurement smaller is its numerical value. A. Assertion is correct, reason is correct, reason is a correct explanation for assertion. B. Assertion is correct, reason is correct, reason is not a correct explanation for assertion. C. Assertion is correct, reason is incorrect. D. Assertion is incorrect, reason is correct.	1

4	Light year is the unit of – A. Time B. Distance C. Area D. Density	1
<b>SECTION B</b>		
5	Add 7.21, 12.14 and 0.0028 and express the result to an appropriate number of significant figures.	2
<b>SECTION C</b>		
6	A. State the principle of homogeneity of dimensions. B. Test the dimensional consistency of the given equations. 1. $s = ut + \frac{1}{2} at^2$ 2. $v = u + at$	3 (1+2)
7	A. What are fundamental and derived units?  B. Which are the seven fundamental quantities in an SI unit System?	3 (2+1)
8	The distance covered by a particle in time t is given by $x = a+bt^2+ct^2+dt^3$ , find the dimensions of a, b, c and d.	3
<b>SECTION D</b>		
9	A gas bubble from an explosion under water, oscillates with a period T proportional to $P^a d^b E^c$ where p is the static pressure, d is the density of water and E is the total energy. A. Find the values a, b, c. B. Write any three advantages of SI system.	5 (3+2)
<b>THE END</b>		