



Date: 13/07/22

GRADE: XI

MONTHLY TEST -1 (2022-23)
CHEMISTRY [043]

Max marks: 20

Time: 1 Hour

General Instructions:

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

Qn. No	SECTION A	Marks allocated
1	The S.I unit of temperature is : (A) Kelvin (B) Celsius (C) Fahrenheit (D) Centigrade	1
2	Assertion (A): One atomic mass unit is defined as one-twelfth of the mass of one carbon-12 atom. Reason (R): Carbon-12 isotope is the most abundant isotope of carbon and has been chosen as the standard. (A) Both A and R are true and R is the correct explanation of A. (B) Both A and R are true but R is not the correct explanation of A. (C) A is true but R is false. (D) Both A and R are false.	1
3	The number of moles present in 6 gms of carbon is: (A) 2 (B) 0.5 (C) 5 (D) 1	1
4	Formation of CO and CO ₂ illustrates the law of -----. (A) Law of conservation of mass (B) Law of Reciprocal proportion (C) Law of Constant Proportion (D) Law of Multiple Proportion	1

	SECTION B										
5	What is the symbol for the SI unit of mole? How is the mole defined?	2									
	SECTION C										
6	200 mL of 1 M HCl solution is mixed with 800 mL of 0.5 M HCl solution. Calculate the molarity of the final solution.	3									
7	<p>If two elements can combine to form more than one compound, the masses of one element that combine with a fixed mass of the other element, are in a whole-number ratio.</p> <ol style="list-style-type: none"> 1. Is this statement true? 2. If yes, according to which law? 3. Give one example related to this law. 	3									
8	<p>Calculate the average atomic mass of hydrogen using the following data:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Isotope</th> <th>%Abundance</th> <th>Molar mass</th> </tr> </thead> <tbody> <tr> <td>^1H</td> <td>99.985</td> <td>1</td> </tr> <tr> <td>^2H</td> <td>0.015</td> <td>2</td> </tr> </tbody> </table>	Isotope	%Abundance	Molar mass	^1H	99.985	1	^2H	0.015	2	3
Isotope	%Abundance	Molar mass									
^1H	99.985	1									
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	SECTION D										
9	<ol style="list-style-type: none"> (i) Explain Dalton's law Atomic theory (ii) State Avogadro's law (iii) Calculate the mass percent of calcium, phosphorus and oxygen in calcium phosphate $\text{Ca}_3(\text{PO}_4)_2$ (The molar mass of calcium phosphate is 310 g/mol. 	2 1 2									
	THE END										