

CHOITHRAM SCHOOL MANIKBAGH INDORE**CLASS XI Session: 2017-18****Subject: Chemistry****Allotment Date: 01/09/2017****Assignment No: 2****Submission Date: 08/ 09/2017**

S.No	QUESTION	MARKS	LEVEL
OBJECTIVE TYPE			
1.	What is the basic difference in approach between the Mendeleev and Periodic Law and the Modern Periodic Law?	1	Knowledge
2.	What are the factors affecting ionic bond formation?	1	Knowledge
3.	How many electrons in sulphur (at.no.16) can have $n+l=3$?	1	Analysis
SHORT ANSWER TYPE I			
4.	Draw the structure of H_3O^+ and NH_2^- ion and calculate formal charge on central atom	2	Understanding and application
5.	CO_2 is linear while H_2O is bent. why	2	understanding
6.	Draw structure of an anion which is iso structural with BF_3	2	Synthesis +understanding
7.	The first ionization enthalpy ($\Delta_i H$) values of the third period elements, Na, Mg and Si are respectively 496, 737 and 786 kJ mol^{-1} . Predict whether the first $\Delta_i H$ value for Al will be more close to 575 or 760 kJ mol^{-1} ? Justify your answer.	2	Analysis
SHORT ANSWER TYPE II			
8.	Arrange the following in increasing order of atomic radius and give reason to support your answer N, O and Ne	3	understanding
9.	Would you expect first ionization energy of O-16 and O-18 would be same or different? Justify your answer	3	analysis
10.	a) In school, children are differentiated from each other by name, class, father's name, section, Roll no. etc. No two students have all these identification variables same. Similarly, quantum no. are those numbers which differentiate one electron from other. "No two electrons can have all the four quantum no. same" i) The above statement is of which principle? ii) Why does an orbital cannot accommodate more than two electrons? iii) What values are possessed by people who live together peacefully?	3	Value based
LONG ANSWER TYPE			
11.	The elements $Z = 120$ have not yet been discovered. In which family /group would you place these elements and also give the electronic configuration in each case.	5	understanding
12.	a) The unpaired electrons in Al and Si are present in $3p$ orbital. Which electrons will experience more effective nuclear charge from the nucleus and why? b) what are the similarities and differences $2p$ and $3p$ orbitals c). The quantum numbers of six electrons are given below. Arrange them in order of increasing energies. Also mention the orbital's occupied by these electrons. a. $n = 5, l = 0$ b. $n = 3, l = 2,$ c. $n = 4, l = 1$ d. $n = 4, l = 0$ e. $n = 3, l = 1$ f. $n = 2, l = 0$	5	Analysis+Understanding