O.P.JINDAL SCHOOL,SAVITRINAGAR

PERIODIC TEST –I(Round-II) (2026-27)

CLASS-XI **MAX.MARKS-20**

SUBJECT-CHEMISTRY **MAX.TIME-1HOUR**

General Instruction:-

(i)All questions are compulsory .There are 12 questions in this question paper with internal choice.
(ii)**SECTION –A:**Question numbers 1 to 6 are MCQs , carrying 1 mark each.
(iii)**SECTION –B:**Question numbers 7 to10 are short answer questions carrying 2 marks each.
(iv)**SECTION –C:**Question numbers 11 and 12 are long questions carrying 3markseach.
(v)Use of calculator is not permitted. However, you may use log tables, if necessary.

1.Total number of orbitals associated with third shell will be :

(a)2 (b)4
(c)9 (d)3

2.Neutrons are present in all atoms except:

(a)He (b)H
(c)C (d) Ne

3. Which of the following orbitals does not make sence?

(a)2d (b)3p
(c)4f (d)6s

4. The number of radial nodes possible for 3d orbital is

(a)3 (b)1
(c)2 (d)0

5. In Bohr's theory,the radius r of the orbit is proportional to

(a)n (b)n^2
(c)n^{-1} (d)n^{-2}

6.A subshell with n=6 ,l=2 can accommodate a maximum of :

(a)10 electrons (b)12 electrons
(c)36 electrons (d)72 electrons

7.Calculate the wave number for the shortest wave lenth transition in the Balmer series.

8.Write the e.c.e. of the following:

(i)Cr (ii)Fe^{2+} (iii)Cl (iv)Cu

9.Using s,p,d ,fnotations,describe the orbital with the following quantum numbers:

(i)n=1 ,l=0 (ii)n=3,l=2 (iii)n=3,l=1 (iv)n=4,l=3

10.A golf ball has a mass of 40 g and speed of 45 m/s.If the speed can be measured with accuracy of 2% , Calculate the uncertainty in position.

11. A 200 watt bulb emits electro magnetic light of wavelength 800 nm.Calculate the number of photons emitted per second by the bulb.

12. Yellow light emitted from a sodium lamp has wave length of 900 nm.Calculate the frequency and wave number of this light.

OR

Explain giving reasons,which of the following sets of quantum numbers are not possible:

(i)n=0 , l=0 , m_l= 0 , m_s=+1/2

(ii) n=1 , l=0 , m_l= 0 , m_s=-1/2

(iii)n=1 , l=1 , m_l= 0 , m_s=+1/2

(iv) n=2 , l=1 , m_l= 0 , m_s=-1/2

(v) n=3 , l=3 , m_l= -3 , m_s=+1/2

(vi) n=3 , l=2 , m_l= 0 , m_s=+1/2
