DPP-01

Only one correct:

1. In lanthanum ($Z = 57$), the 57th electron enters in a

    (A) 6p orbital   (B) 5d orbital   (C) 6s orbital   (D) 4 f orbital

2. In Mendeleev periodic table total no. of groups are:

    (A) 8   (B) 7   (C) 18   (D) 12

3. Atomic number of the inert gas of 7th period $= 118$. Which is correct IUPAC name of last element halogen family in 7th period –

    (A) Ununoctium   (B) Ununnilium

    (C) Ununennium   (D) Ununseptium

4. Three element X, Y, Z are following Doberiner's Triad rule. If the atomic weight of X and Y are 10 and 26 respectively, then atomic weight of Z will be

    (A) 34   (B) 40   (C) 42   (D) 18

5. The valence shell of the element X contains 1 electron in 5s subshell and below that shell, 4 electrons in 4 d subshell. The element belongs to which group in periodic table-

    (A) 4th group   (B) 5th group

    (C) 6th group   (D) 7th group

More than one correct

6. An element have electronic configuration as $1s^2, 2s^2, 2p^6, 3s^2, 3p^6, 4s^2, 3d^7$. Correct statement regarding element is –

    (A) Element must be Co

    (B) Element belongs to group no. '9' according to the long form of periodic table

    (C) Maximum no. of electrons in element having $m = +1$ are 6

    (D) Element have magnetic moment $\sqrt{15}$ B.M.

Match the column:

7. Match List-I (atomic number of elements) with List-II (position of element in periodic table)

	List-I		List-II
(A)	19	**(P)**	p-block
(B)	22	**(Q)**	f-block
(C)	32	**(R)**	d-block
(D)	64	**(S)**	s-block

8. **Column-I**   **Column-II**

   (Electronic configuration of element)   **(Correct description)**

   (A) $1s^1, 2s^2, 2p^2, 3s^1$ **(P)** s or p block element

   (B) $1s^2, 2s^2, 2p^6, 3s^2, 3p^1$ **(Q)** III period element

   (C) $1s^2, 2s^2, 2p^6, 3s^2, 3p^6, 3d^5, 4s^1$ **(R)** Group number VI in the long form periodic table

   (D) $1s^2, 2s^1, 2p^3, 3s^1, 3p^3, 4s^1$ **(S)** d-block element

                                                         (T) Valence shell electron ≥ 3

   Subjective:

9. What are the blocks groups and period for the following E.C. in periodic table:

   (a) $1s^2\ 2s^2\ 2p^6\ 3s^1\ 3p^3\ 3d^2$ **(b)** $1s^2\ 2s^1 2p^1$

   (c) $1s^2$ **(d)** $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6\ 3d^{10}\ 4s^2$

   (e) $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6\ 3d^5\ 4s^1$ **(f)** $[Xe]6s^2\ 5d^1$

   (g) Actinium: $[Rn]\ 6d^1\ 7s^2$ **(h)** Thorium: $[Rn]\ 6d^2\ 7s^2$

10. What is the value of $(n + \ell)$ for the unpaired e^- in an atom of an element which is present in the third period and seventeenth group of the periodic table.

ANSWER KEY

DPP-01

1. B **2.** A **3.** D **4.** C **5.** B **6.** ABCD

7. (A) $-$S;; (B) $-$R; (C) $-$P; (D) $-$ Q **8.** (A) - P, T ; (B) - P, Q, T ; (C) - R, S, T ; (D) - P, Q

9. **(a)** p, VIA, 3rd ; **(b)** s, IIA, 2nd ; **(c)** s, 0, I; **(d)** d, IIB, 4th period;

(e) d, VIB, 4th ; **(f)** d, IIIB, 6th ; **(g)** d, IIIB, 7th ; **(h)** f, IIIB, 7th

10. (4)