

## CHEMISTRY

### Periodic Properties

#### Periodic Table

- The elements with atomic number 117 and 120 are yet to be discovered. In which group would you place these elements when discovered?
  - 17, 2
  - 16, 4
  - 15, 3
  - 18, 2
- The most electropositive element possesses the electronic configuration
  - [He]2s<sup>1</sup>
  - [Ne]3s<sup>2</sup>
  - [Xe]6s<sup>1</sup>
  - [Xe]6s<sup>2</sup>
- The outer electronic structure of lawrencium (atomic number 103) is
  - [Rn] 5f<sup>13</sup>7s<sup>2</sup>7p<sup>2</sup>
  - [Rn] 5f<sup>13</sup>6d<sup>1</sup>7s<sup>1</sup>7p<sup>2</sup>
  - [Rn] 5f<sup>14</sup>7s<sup>1</sup>7p<sup>2</sup>
  - [Rn] 5f<sup>14</sup>6d<sup>1</sup>7s<sup>2</sup>
- The atomic numbers of the metallic and non-metallic elements which are liquid at room temperature respectively are
  - 55, 87
  - 33, 87
  - 35, 80
  - 80, 35
- Transition metals are not characterised by
  - fixed valency
  - coloured compound
  - high melting and boiling points
  - tendency of form complexes
- Which of the following represents an excited state of an atom?
  - [Ne]3s<sup>2</sup>3p<sup>6</sup>4s<sup>2</sup>3d<sup>8</sup>
  - [Ne]3s<sup>2</sup>3p<sup>6</sup>4s<sup>1</sup>3d<sup>5</sup>
  - [Ne]3s<sup>2</sup>3p<sup>6</sup>4s<sup>2</sup>3d<sup>1</sup>
  - 1s<sup>2</sup>2s<sup>2</sup>2p<sup>5</sup>3s<sup>1</sup>
- Which of the following is not a representative element?
  - Tellurium
  - Tantalum
  - Thallium
  - Astatine
- Consider the following electronic configuration of an element (P)
 
$$[\text{Xe}]4f^{14}5d^16s^2$$
 Then correct statement about element P is
  - It belongs to 6<sup>th</sup> period and 1<sup>st</sup> group
  - It belongs to 6<sup>th</sup> period and 2<sup>nd</sup> group
  - It belongs to 6<sup>th</sup> period and 3<sup>rd</sup> group
  - None of these
- La(lanthanum) having atomic number 57 is a member of
  - s-block elements
  - p-block elements
  - d-block elements
  - f-block elements
- Consider the following information about element P and Q
 

Element	Period number	Group number
P	2	15
Q	3	2

 The formula of the compound formed by P and Q element is
  - PQ
  - P<sub>3</sub>Q<sub>2</sub>
  - P<sub>2</sub>Q<sub>3</sub>
  - PQ<sub>2</sub>