

## Chemistry Model Question Paper - 10

### Question 1 :

Generally, the first ionization energy increases along a period. But there are some exceptions. One which is NOT an exception is \_\_\_\_\_.

(A) Na and Mg

(B) N and O

(C) Be and B

(D) Mg and Al

**Answer: (A)**

**Question 2 :** Which one of these is NOT true for benzene?

(A) There are three carbon-carbon single bonds and three carbon-carbon double bonds.

(B) It forms only one type of monosubstituted product.

(C) The bond angle between the carbon-carbon bonds is 120°.

(D) The heat of hydrogenation of benzene is less than the theoretical value.

**Answer: (A)**

**Question 3 :**

Gram molecular volume of oxygen at STP is

(A) 11200 cm<sup>3</sup>

(B) 22400 cm<sup>3</sup>

(C) 5600 cm<sup>3</sup>

(D) 3200 cm<sup>3</sup>

**Answer: (B)**

**Question 4 :**

Graphite is a soft solid lubricant extremely difficult to melt. The reason for this anomalous behaviour is that graphite

(A) has molecules of variable molecular masses like polymers.

(B) has carbon atoms arranged in large plates of rings of strongly bound carbon atoms with weak interplate bonds.

(C) is a non-crystalline substance.

(D) is an allotropic form of carbon.

**Answer: (B)**

**Question 5 :** Helium is used in balloons in place of hydrogen because it is

(A) incombustible

- (B) lighter than hydrogen
- (C) radioactive
- (D) more abundant than hydrogen

**Answer: (A)**

### **Question 6 :**

Hofmann's bromamide reaction is to convert

(A) amine to amide

(B) amide to amine

(C) alcohol to acid

(D) acid to alcohol

**Answer: (B)**

### **Question 7 :**

How many chiral carbon atoms are present in 2, 3, 4 – trichloropentane?

(A) 3

(B) 2

(C) 1

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(D) 4

**Answer: (B)**

**Question 8 :** How many optically active stereoisomers are possible for butan-2, 3-diol?

(A) 1

(B) 2

(C) 3

(D) 4

**Answer: (B)**

**Question 9 :**

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Hydrogen gas is not liberated when the following metal is added to dil. HCl

(A) Ag

(B) Zn

(C) Mg

(D) Sn

**Answer: (A)**

**Question 10 :**

Hydroxyl ion concentration of 1M HCl is

(A)  $1 \times 10^{14} \text{ mol dm}^{-3}$

(B)  $1 \times 10^{-1} \text{ mol dm}^{-3}$

(C)  $1 \times 10^{-13} \text{ mol dm}^{-3}$

(D)  $1 \times 10^1 \text{ mol dm}^{-3}$

**Answer: (A)**